

FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 1 OF 5



HAYS COUNTY, TEXAS AND INCORPORATED AREAS

COMMUNITY NAME	NUMBER
AUSTIN, CITY OF	480624
BEAR CREEK, VILLAGE OF	481679
BUDA, CITY OF	481640
CREEDMOOR, CITY OF	481697
DRIPPING SPRINGS, CITY OF	481667
HAYS COUNTY, UNINCORPORATED AREAS	480321
HAYS, CITY OF	481669
KYLE, CITY OF	481108
MOUNTAIN CITY, CITY OF	481671
NIEDERWALD, CITY OF	481670
SAN MARCOS, CITY OF	485505
UHLAND, TOWNSHIP OF	481668
WIMBERLEY, VILLAGE OF	481694
WOODCREEK, CITY OF	481641

PRELIMINARY
4/7/2017

REVISED:

FLOOD INSURANCE STUDY NUMBER
48209CV001B

Version Number 2.3.3.3



FEMA

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Published Separately

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FLOOD INSURANCE STUDY REPORT

HAYS COUNTY, TEXAS

SECTION 1.0 – INTRODUCTION

1.1 The National Flood Insurance Program

The National Flood Insurance Program (NFIP) is a voluntary Federal program that enables property owners in participating communities to purchase insurance protection against losses from flooding. This insurance is designed to provide an alternative to disaster assistance to meet the escalating costs of repairing damage to buildings and their contents caused by floods.

For decades, the national response to flood disasters was generally limited to constructing flood-control works such as dams, levees, sea-walls, and the like, and providing disaster relief to flood victims. This approach did not reduce losses nor did it discourage unwise development. In some instances, it may have actually encouraged additional development. To compound the problem, the public generally could not buy flood coverage from insurance companies, and building techniques to reduce flood damage were often overlooked.

In the face of mounting flood losses and escalating costs of disaster relief to the general taxpayers, the U.S. Congress created the NFIP. The intent was to reduce future flood damage through community floodplain management ordinances, and provide protection for property owners against potential losses through an insurance mechanism that requires a premium to be paid for the protection.

The U.S. Congress established the NFIP on August 1, 1968, with the passage of the National Flood Insurance Act of 1968. The NFIP was broadened and modified with the passage of the Flood Disaster Protection Act of 1973 and other legislative measures. It was further modified by the National Flood Insurance Reform Act of 1994 and the Flood Insurance Reform Act of 2004. The NFIP is administered by the Federal Emergency Management Agency (FEMA), which is a component of the Department of Homeland Security (DHS).

Participation in the NFIP is based on an agreement between local communities and the Federal Government. If a community adopts and enforces floodplain management regulations to reduce future flood risks to new construction and substantially improved structures in Special Flood Hazard Areas (SFHAs), the Federal Government will make flood insurance available within the community as a financial protection against flood losses. The community's floodplain management regulations must meet or exceed criteria established in accordance with Title 44 Code of Federal Regulations (CFR) Part 60, *Criteria for Land Management and Use*.

SFHAs are delineated on the community's Flood Insurance Rate Maps (FIRMs). Under the NFIP, buildings that were built before the flood hazard was identified on the community's FIRMs are generally referred to as "Pre-FIRM" buildings. When the NFIP was created, the U.S. Congress recognized that insurance for Pre-FIRM buildings would be prohibitively expensive if the premiums were not subsidized by the Federal

Government. Congress also recognized that most of these floodprone buildings were built by individuals who did not have sufficient knowledge of the flood hazard to make informed decisions. The NFIP requires that full actuarial rates reflecting the complete flood risk be charged on all buildings constructed or substantially improved on or after the effective date of the initial FIRM for the community or after December 31, 1974, whichever is later. These buildings are generally referred to as “Post-FIRM” buildings.

1.2 Purpose of this Flood Insurance Study Report

This Flood Insurance Study (FIS) Report revises and updates information on the existence and severity of flood hazards for the study area. The studies described in this report developed flood hazard data that will be used to establish actuarial flood insurance rates and to assist communities in efforts to implement sound floodplain management.

In some states or communities, floodplain management criteria or regulations may exist that are more restrictive than the minimum Federal requirements. Contact your State NFIP Coordinator to ensure that any higher State standards are included in the community’s regulations.

1.3 Jurisdictions Included in the Flood Insurance Study Project

This FIS Report covers the entire geographic area of Hays County, Texas.

The jurisdictions that are included in this project area, along with the Community Identification Number (CID) for each community and the United States Geological Survey (USGS) 8-digit Hydrologic Unit Code (HUC-8) sub-basins affecting each, are shown in Table 1. The FIRM panel numbers that affect each community are listed. If the flood hazard data for the community is not included in this FIS Report, the location of that data is identified.

The location of flood hazard data for participating communities in multiple jurisdictions is also indicated in the table.

Jurisdictions that have no identified SFHAs as of the effective date of this study are indicated in the table. Changed conditions in these communities (such as urbanization or annexation) or the availability of new scientific or technical data about flood hazards could make it necessary to determine SFHAs in these jurisdictions in the future.

Table 1: Listing of NFIP Jurisdictions

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Austin, City of ¹	480624	12090205	48209C0141G 48209C0145G 48209C0285F	Travis County, Texas FIS, 2016

Table 1: Listing of NFIP Jurisdictions, (continued)

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Bear Creek, Village of	481679	12090205	48209C0130G 48209C0137G 48209C0141G	
Buda, City of	481640	12090205, 12100203	48209C0260G 48209C0280G 48209C0285F 48209C0290G	
Creedmoor, City of ¹	481697	12090301, 12100203	48209C0295F 48209C0315F	Travis County, Texas FIS, 2016
Dripping Springs, City of	481667	12090205	48209C0085G 48209C0105G 48209C0108G 48209C0109G 48209C0115G 48209C0128G	
Hays, City of	481669	12090205	48209C0260G 48209C0280G	
Hays County, Unincorporated Areas	480321	12090205, 12090206, 12100203	48209C0025F 48209C0050G 48209C0070G 48209C0082G 48209C0085G 48209C0095G 48209C0100G 48209C0101G 48209C0105G 48209C0106G 48209C0107G 48209C0108G 48209C0109G 48209C0115G 48209C0120G 48209C0126G 48209C0128G 48209C0130G 48209C0137G 48209C0140G 48209C0141G 48209C0145G 48209C0165G 48209C0200G	

Table 1: Listing of NFIP Jurisdictions, (continued)

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Hays County, Unincorporated Areas	480321	12090205, 12090206, 12100203	48209C0215G 48209C0217G 48209C0219G 48209C0220G 48209C0225G 48209C0230G 48209C0235G 48209C0236G 48209C0237F 48209C0238G 48209C0239G 48209C0241G 48209C0243F 48209C0245G 48209C0255G 48209C0260G 48209C0265G 48209C0270G 48209C0280G 48209C0285F 48209C0290G 48209C0291F 48209C0293F 48209C0295F 48209C0315F 48209C0330G 48209C0335G 48209C0345F ² 48209C0355G 48209C0360G 48209C0365G 48209C0369G 48209C0370G 48209C0380G 48209C0385G 48209C0386G 48209C0387G 48209C0388G 48209C0389G 48209C0391G 48209C0392G 48209C0393G 48209C0394G 48209C0405F 48209C0410F 48209C0415F 48209C0420F ²	

Table 1: Listing of NFIP Jurisdictions, (continued)

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
Hays County, Unincorporated Areas	480321	12090205, 12090206, 12100203	48209C0430F 48209C0457G 48209C0459F ² 48209C0460F ² 48209C0467F 48209C0470F 48209C0475F ² 48209C0476G 48209C0477G 48209C0478G 48209C0479G 48209C0481G 48209C0482G 48209C0483G 48209C0484G ² 48209C0486F 48209C0487F 48209C0488F 48209C0495G ²	
Kyle, City of	481108	12090205, 12100203	48209C0270G 48209C0290G 48209C0385G 48209C0405F	
Mountain City, City of	481671	12090205, 12100203	48209C0270G	
Niederwald, City of ¹	481670	12100203	48209C0291F 48209C0293F 48209C0295F 48209C0315F 48209C0410F 48209C0430F	Caldwell County, 2012
San Marcos, City of	485505	12100203	48209C0369G 48209C0385G 48209C0387G 48209C0388G 48209C0389G 48209C0391G 48209C0392G 48209C0393G 48209C0394G 48209C0415F 48209C0457G 48209C0459F ²	

Table 1: Listing of NFIP Jurisdictions, (continued)

Community	CID	HUC-8 Sub-Basin(s)	Located on FIRM Panel(s)	If Not Included, Location of Flood Hazard Data
San Marcos, City of	485505	12100203	48209C0467F 48209C0476G 48209C0477G 48209C0478G 48209C0479G 48209C0481G 48209C0482G 48209C0483G 48209C0484F ² 48209C0486F 48209C0487F 48209C0488F 48209C0495F ²	
Uhland, Township of ¹	481668	12100203	48209C0405F 48209C0410F	Caldwell County, 2012
Wimberley, Village of	481694	12100203	48209C0219G 48209C0236G 48209C0237F 48209C0238G 48209C0239G 48209C0243F 48209C0335G 48209C0355G 48209C0360G	
Woodcreek, City of	481641	12100203	48209C0236G 48209C0238G	

¹Community is mapped in multiple counties. This FIS only covers the portion within Hays County

²Panel Not Printed

1.4 Considerations for using this Flood Insurance Study Report

The NFIP encourages State and local governments to implement sound floodplain management programs. To assist in this endeavor, each FIS Report provides floodplain data, which may include a combination of the following: 10-, 4-, 2-, 1-, and 0.2-percent annual chance flood elevations (the 1% annual chance flood elevation is also referred to as the Base Flood Elevation (BFE)); delineations of the 1% annual chance and 0.2% annual chance floodplains; and 1% annual chance floodway. This information is presented on the FIRM and/or in many components of the FIS Report, including Flood Profiles, Floodway Data tables, Summary of Non-Coastal Stillwater Elevations tables, and Coastal Transect Parameters tables (not all components may be provided for a specific FIS).

This section presents important considerations for using the information contained in this FIS Report and the FIRM, including changes in format and content. Figures 1, 2, and 3 present information that applies to using the FIRM with the FIS Report.

- Part or all of this FIS Report may be revised and republished at any time. In addition, part of this FIS Report may be revised by a Letter of Map Revision (LOMR), which does not involve republication or redistribution of the FIS Report. Refer to Section 6.5 of this FIS Report for information about the process to revise the FIS Report and/or FIRM.

It is, therefore, the responsibility of the user to consult with community officials by contacting the community repository to obtain the most current FIS Report components. Communities participating in the NFIP have established repositories of flood hazard data for floodplain management and flood insurance purposes. Community map repository addresses are provided in Table 31, "Map Repositories," within this FIS Report.

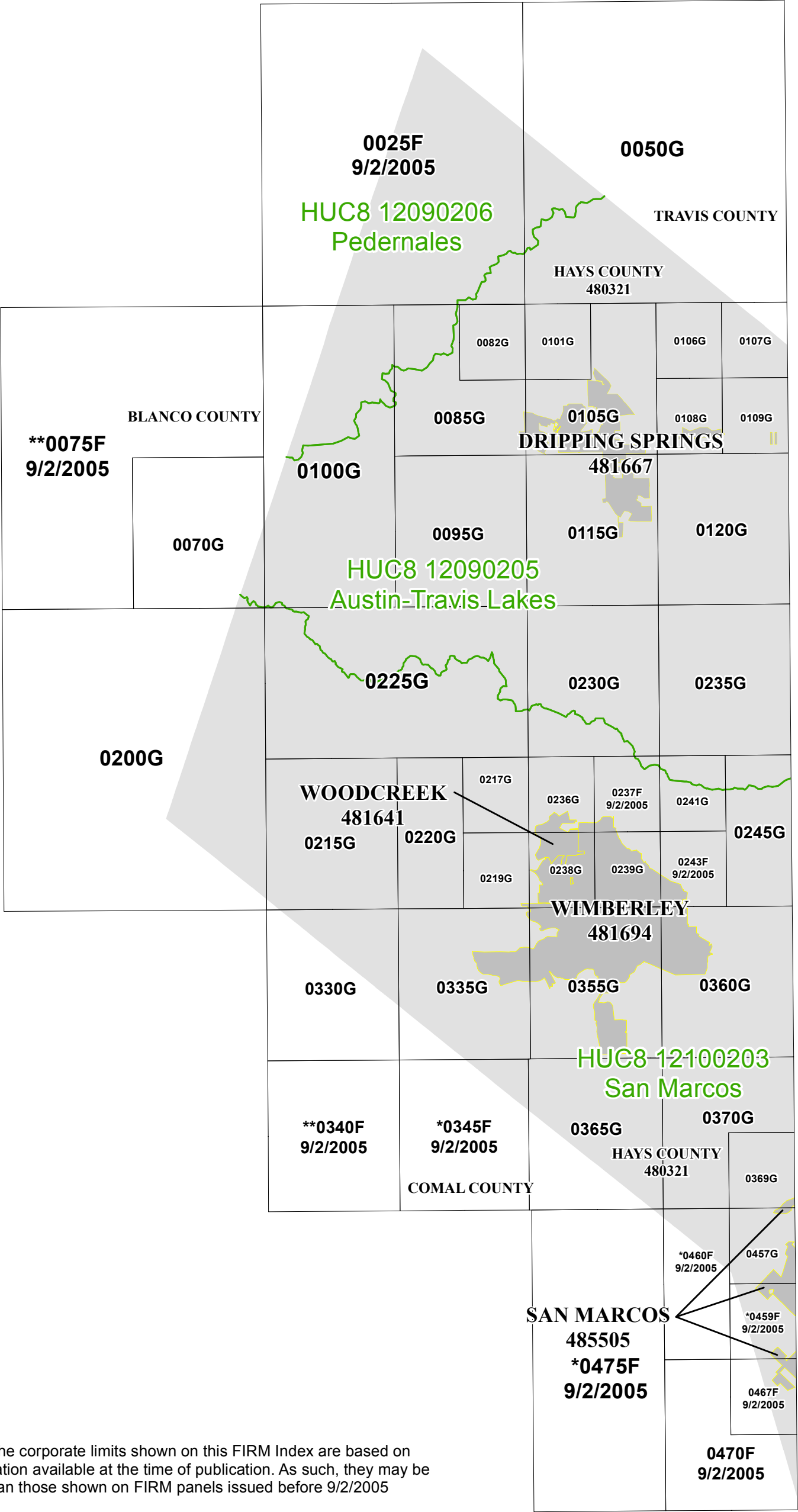
- New FIS Reports are frequently developed for multiple communities, such as entire counties. A countywide FIS Report incorporates previous FIS Reports for individual communities and the unincorporated area of the county (if not jurisdictional) into a single document and supersedes those documents for the purposes of the NFIP.

The initial Countywide FIS Report for Hays County became effective on February 18, 1998. Refer to Table 28 for information about subsequent revisions to the FIRMs.

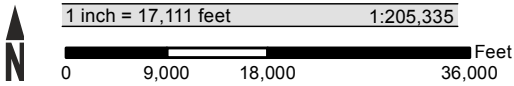
- FEMA has developed a *Guide to Flood Maps* (FEMA 258) and online tutorials to assist users in accessing the information contained on the FIRM. These include how to read panels and step-by-step instructions to obtain specific information. To obtain this guide and other assistance in using the FIRM, visit the FEMA Web site at www.fema.gov/online-tutorials.

The FIRM Index in Figure 1 shows the overall FIRM panel layout within Hays County, and also displays the panel number and effective date for each FIRM panel in the county. Other information shown on the FIRM Index includes community boundaries and USGS HUC-8 codes.

Figure 1: FIRM Panel Index



ATTENTION: The corporate limits shown on this FIRM Index are based on the best information available at the time of publication. As such, they may be more current than those shown on FIRM panels issued before 9/2/2005

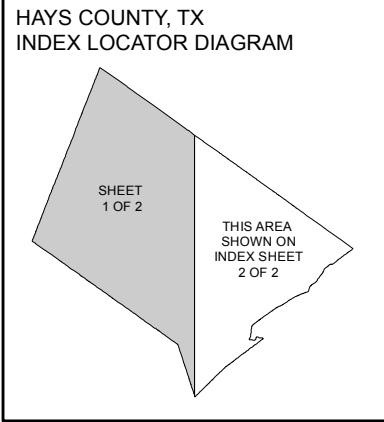


Map Projection:
Universal Transverse Mercator Zone 14 North;
North American Datum 1983

THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT [HTTP://MSC.FEMA.GOV](http://MSC.FEMA.GOV)

SEE FLOOD INSURANCE STUDY FOR ADDITIONAL INFORMATION

*PANEL NOT PRINTED - NO SPECIAL FLOOD HAZARD AREAS
**PANEL NOT PRINTED - AREA NOT INCLUDED



NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP PANEL INDEX

HAYS COUNTY, TEXAS and Incorporated Areas

PANELS PRINTED:
0025, 0050, 0070, 0082, 0085, 0095, 0100, 0101, 0105, 0106, 0107, 0108, 0109, 0115, 0120, 0200, 0215, 0217, 0219, 0220, 0225, 0230, 0235, 0236, 0237, 0238, 0239, 0241, 0243, 0245, 0330, 0335, 0355, 0360, 0365, 0369, 0370, 0457, 0467, 0470

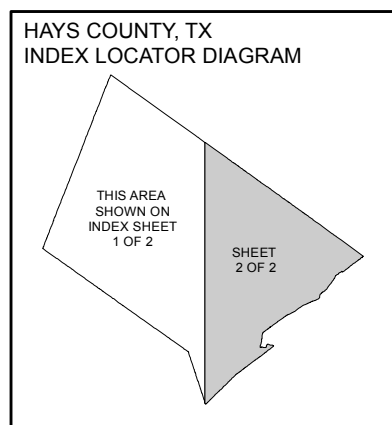
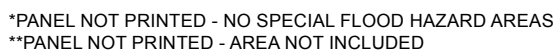
PRELIMINARY
4/7/2017



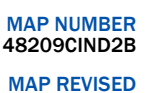
FEMA

MAP NUMBER
48209CIND1B
MAP REVISED

ATTENTION: The corporate limits shown on this FIRM Index are based on the best information available at the time of publication. As such, they may be more current than those shown on FIRM panels issued before 9/2/2005



PRELIMINARY
4/7/2017



Each FIRM panel may contain specific notes to the user that provide additional information regarding the flood hazard data shown on that map. However, the FIRM panel does not contain enough space to show all the notes that may be relevant in helping to better understand the information on the panel. Figure 2 contains the full list of these notes.

Figure 2: FIRM Notes to Users

<div><h2>NOTES TO USERS</h2><p>For information and questions about this map, available products associated with this FIRM including historic versions of this FIRM, how to order products, or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website. Users may determine the current map date for each FIRM panel by visiting the FEMA Flood Map Service Center website or by calling the FEMA Map Information eXchange.</p><p>Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.</p><p>For community and countywide map dates, refer to Table 28 in this FIS Report.</p><p>To determine if flood insurance is available in the community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.</p><p>PRELIMINARY FIS REPORT: FEMA maintains information about map features, such as street locations and names, in or near designated flood hazard areas. Requests to revise information in or near designated flood hazard areas may be provided to FEMA during the community review period, at the final Consultation Coordination Officer's meeting, or during the statutory 90-day appeal period. Approved requests for changes will be shown on the final printed FIRM.</p></div>
<div><p>The map is for use in administering the NFIP. It may not identify all areas subject to flooding, particularly from local drainage sources of small size. Consult the community map repository to find updated or additional flood hazard information.</p><p>BASE FLOOD ELEVATIONS: For more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, consult the Flood Profiles and Floodway Data and/or Summary of Non-Coastal Stillwater Elevations tables within this FIS Report. Use the flood elevation data within the FIS Report in conjunction with the FIRM for construction and/or floodplain management.</p><p>FLOODWAY INFORMATION: Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the FIS Report for this jurisdiction.</p></div>

FLOOD CONTROL STRUCTURE INFORMATION: Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 4.3 "Non-Levee Flood Protection Measures" of this FIS Report for information on flood control structures for this jurisdiction.

PROJECTION INFORMATION: The projection used in the preparation of the map was Universal Transverse Mercator (UTM) Zone 14. The horizontal datum was the North American Datum of 1983 NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.

ELEVATION DATUM: Flood elevations on the FIRM are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

*NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242*

Local vertical monuments may have been used to create the map. To obtain current monument information, please contact the appropriate local community listed in Table 31 of this FIS Report.

BASE MAP INFORMATION: Base map information shown on the FIRM was provided by TxDOT, the city of San Marcos, USGS and the Texas Orthoimagery Program. This imagery was flown in 2015 and was produced with a 0.5-meter ground sample distance. For information about base maps, refer to Section 6.2 "Base Map" in this FIS Report.

Corporate limits shown on the map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after the map was published, map users should contact appropriate community officials to verify current corporate limit locations.

NOTES FOR FIRM INDEX

REVISIONS TO INDEX: As new studies are performed and FIRM panels are updated within Hays County, Texas, corresponding revisions to the FIRM Index will be incorporated within the FIS Report to reflect the effective dates of those panels. Please refer to Table 28 of this FIS Report to determine the most recent FIRM revision date for each community. The most recent FIRM panel effective date will correspond to the most recent index date.

ATTENTION: The corporate limits shown on this FIRM Index are based on the best information available at the time of publication. As such, they may be more current than those shown on FIRM panels issued before 9/2/2005.

SPECIAL NOTES FOR SPECIFIC FIRM PANELS

This Notes to Users section was created specifically for Hays County, Texas, effective **TBD**.

FLOOD RISK REPORT: A Flood Risk Report (FRR) may be available for many of the flooding sources and communities referenced in this FIS Report. The FRR is provided to increase public awareness of flood risk by helping communities identify the areas within their jurisdictions that have the greatest risks. Although non-regulatory, the information provided within the FRR can assist communities in assessing and evaluating mitigation opportunities to reduce these risks. It can also be used by communities developing or updating flood risk mitigation plans. These plans allow communities to identify and evaluate opportunities to reduce potential loss of life and property. However, the FRR is not intended to be the final authoritative source of all flood risk data for a project area; rather, it should be used with other data sources to paint a comprehensive picture of flood risk.

Each FIRM panel contains an abbreviated legend for the features shown on the maps. However, the FIRM panel does not contain enough space to show the legend for all map features. Figure 3 shows the full legend of all map features. Note that not all of these features may appear on the FIRM panels in Hays County.

Figure 3: Map Legend for FIRM


SPECIAL FLOOD HAZARD AREAS: <i>The 1% annual chance flood, also known as the base flood or 100-year flood, has a 1% chance of happening or being exceeded each year. Special Flood Hazard Areas are subject to flooding by the 1% annual chance flood. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood. The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights. See note for specific types. If the floodway is too narrow to be shown, a note is shown.</i>	
	Special Flood Hazard Areas subject to inundation by the 1% annual chance flood (Zones A, AE, AH, AO, AR, A99, V and VE)
Zone A	The flood insurance rate zone that corresponds to the 1% annual chance floodplains. No base (1% annual chance) flood elevations (BFEs) or depths are shown within this zone.
Zone AE	The flood insurance rate zone that corresponds to the 1% annual chance floodplains. Base flood elevations derived from the hydraulic analyses are shown within this zone.
Zone AH	The flood insurance rate zone that corresponds to the areas of 1% annual chance shallow flooding (usually areas of ponding) where average depths are between 1 and 3 feet. Whole-foot BFEs derived from the hydraulic analyses are shown at selected intervals within this zone.
Zone AO	The flood insurance rate zone that corresponds to the areas of 1% annual chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between 1 and 3 feet. Average whole-foot depths derived from the hydraulic analyses are shown within this zone.
Zone AR	The flood insurance rate zone that corresponds to areas that were formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
Zone A99	The flood insurance rate zone that corresponds to areas of the 1% annual chance floodplain that will be protected by a Federal flood protection system where construction has reached specified statutory milestones. No base flood elevations or flood depths are shown within this zone.
Zone V	The flood insurance rate zone that corresponds to the 1% annual chance coastal floodplains that have additional hazards associated with storm waves. Base flood elevations are not shown within this zone.
Zone VE	Zone VE is the flood insurance rate zone that corresponds to the 1% annual chance coastal floodplains that have additional hazards associated with storm waves. Base flood elevations derived from the coastal analyses are shown within this zone as static whole-foot elevations that apply throughout the zone.

Figure 3: Map Legend for FIRM







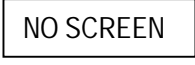
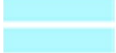











	Regulatory Floodway determined in Zone AE.
OTHER AREAS OF FLOOD HAZARD	
	Shaded Zone X: Areas of 0.2% annual chance flood hazards and areas of 1% annual chance flood hazards with average depths of less than 1 foot or with drainage areas less than 1 square mile.
	Future Conditions 1% Annual Chance Flood Hazard – Zone X: The flood insurance rate zone that corresponds to the 1% annual chance floodplains that are determined based on future-conditions hydrology. No base flood elevations or flood depths are shown within this zone.
	Area with Reduced Flood Risk due to Levee: Areas where an accredited levee, dike, or other flood control structure has reduced the flood risk from the 1% annual chance flood. See Notes to Users for important information.
	Area with Flood Risk due to Levee: Areas where a non-accredited levee, dike, or other flood control structure is shown as providing protection to less than the 1% annual chance flood.
OTHER AREAS	
	Zone D (Areas of Undetermined Flood Hazard): The flood insurance rate zone that corresponds to unstudied areas where flood hazards are undetermined, but possible.
	Unshaded Zone X: Areas of minimal flood hazard.
FLOOD HAZARD AND OTHER BOUNDARY LINES	
 (ortho)  (vector)	Flood Zone Boundary (white line on ortho-photography-based mapping; gray line on vector-based mapping)
	Limit of Study
	Jurisdiction Boundary
	Limit of Moderate Wave Action (LiMWA): Indicates the inland limit of the area affected by waves greater than 1.5 feet
GENERAL STRUCTURES	
   	Channel, Culvert, Aqueduct, or Storm Sewer
  	Dam, Jetty, Weir

Figure 3: Map Legend for FIRM


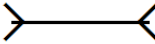
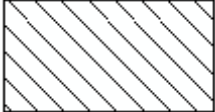
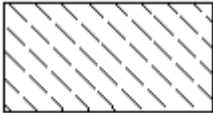

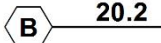

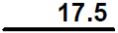














	Levee, Dike, or Floodwall
 Bridge	Bridge
COASTAL BARRIER RESOURCES SYSTEM (CBRS) AND OTHERWISE PROTECTED AREAS (OPA): CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.	
 CBRS AREA 09/30/2009	Coastal Barrier Resources System Area: Labels are shown to clarify where this area shares a boundary with an incorporated area or overlaps with the floodway.
 OTHERWISE PROTECTED AREA 09/30/2009	Otherwise Protected Area
REFERENCE MARKERS	
 22.0	River mile Markers
CROSS SECTION & TRANSECT INFORMATION	
 20.2	Lettered Cross Section with Regulatory Water Surface Elevation (BFE)
 21.1	Numbered Cross Section with Regulatory Water Surface Elevation (BFE)
 17.5	Unlettered Cross Section with Regulatory Water Surface Elevation (BFE)
 8	Coastal Transect
	Profile Baseline: Indicates the modeled flow path of a stream and is shown on FIRM panels for all valid studies with profiles or otherwise established base flood elevation.
	Coastal Transect Baseline: Used in the coastal flood hazard model to represent the 0.0-foot elevation contour and the starting point for the transect and the measuring point for the coastal mapping.
 513	Base Flood Elevation Line
ZONE AE (EL 16)	Static Base Flood Elevation value (shown under zone label)
ZONE AO (DEPTH 2)	Zone designation with Depth

Figure 3: Map Legend for FIRM

ZONE AO (DEPTH 2) (VEL 15 FPS)	Zone designation with Depth and Velocity
BASE MAP FEATURES	
 <i>Missouri Creek</i>	River, Stream or Other Hydrographic Feature
	Interstate Highway
	U.S. Highway
	State Highway
	County Highway
 MAPLE LANE	Street, Road, Avenue Name, or Private Drive if shown on Flood Profile
 <i>RAILROAD</i>	Railroad
	Horizontal Reference Grid Line
	Horizontal Reference Grid Ticks
	Secondary Grid Crosshairs
Land Grant	Name of Land Grant
7	Section Number
R. 43 W. T. 22 N.	Range, Township Number
⁴²76^{000m}E	Horizontal Reference Grid Coordinates (UTM)
365000 FT	Horizontal Reference Grid Coordinates (State Plane)
80° 16' 52.5"	Corner Coordinates (Latitude, Longitude)

SECTION 2.0 – FLOODPLAIN MANAGEMENT APPLICATIONS

2.1 Floodplain Boundaries

To provide a national standard without regional discrimination, the 1% annual chance (100-year) flood has been adopted by FEMA as the base flood for floodplain management purposes. The 0.2% annual chance (500-year) flood is employed to indicate additional areas of flood hazard in the community.

Each flooding source included in the project scope has been studied and mapped using professional engineering and mapping methodologies that were agreed upon by FEMA and Hays County as appropriate to the risk level. Flood risk is evaluated based on factors such as known flood hazards and projected impact on the built environment. Engineering analyses were performed for each studied flooding source to calculate its 1% annual chance flood elevations; elevations corresponding to other floods (e.g. 10-, 4-, 2-, 0.2-percent annual chance, etc.) may have also been computed for certain flooding sources. Engineering models and methods are described in detail in Section 5.0 of this FIS Report. The modeled elevations at cross sections were used to delineate the floodplain boundaries on the FIRM; between cross sections, the boundaries were interpolated using elevation data from various sources. More information on specific mapping methods is provided in Section 6.0 of this FIS Report.

Depending on the accuracy of available topographic data (Table 23), study methodologies employed (Section 5.0), and flood risk, certain flooding sources may be mapped to show both the 1% and 0.2% annual chance floodplain boundaries, regulatory water surface elevations (BFEs), and/or a regulatory floodway. Similarly, other flooding sources may be mapped to show only the 1% annual chance floodplain boundary on the FIRM, without published water surface elevations. In cases where the 1% and 0.2% annual chance floodplain boundaries are close together, only the 1% annual chance floodplain boundary is shown on the FIRM. Figure 3, “Map Legend for FIRM”, describes the flood zones that are used on the FIRMs to account for the varying levels of flood risk that exist along flooding sources within the project area. Table 2 and Table 3 indicate the flood zone designations for each flooding source and each community within Hays County, respectively.

Table 2 “Flooding Sources Included in this FIS Report,” lists each flooding source, including its study limits, affected communities, mapped zone on the FIRM, and the completion date of its engineering analysis from which the flood elevations on the FIRM and in the FIS Report were derived. Descriptions and dates for the latest hydrologic and hydraulic analyses of the flooding sources are shown in Table 13. Floodplain boundaries for these flooding sources are shown on the FIRM (published separately) using the symbology described in Figure 3. On the map, the 1% annual chance floodplain corresponds to the SFHAs. The 0.2% annual chance floodplain shows areas that, although out of the regulatory floodplain, are still subject to flood hazards.

Small areas within the floodplain boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data. The procedures to remove these areas from the SFHA are described in Section 6.5 of this FIS Report.

Table 2: Flooding Sources Included in this FIS Report

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi ²) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Barton Creek	Hays County, Unincorporated Areas	At Hays County political boundary	Approximately 300 feet downstream of Twin Oaks Trail	12090205	10.0		Y	AE	August 2014
Barton Creek	Hays County, Unincorporated Areas	At Bell Springs Rd and Upstream Limit of Detailed Study	Approximately 500 feet downstream of Twin Oaks Trl Lane	12090205	3.9		N	A	February 2015
Barton Creek Tributary	Hays County, Unincorporated Areas	At confluence with Barton Creek	Approximately 1325 feet upstream of confluence with Barton Creek	12090205	0.3		N	A	February 2013
Barton Creek Tributary 1	Hays County, Unincorporated Areas	At confluence with Barton Creek Tributary 39-3	Approximately 1650 feet upstream of confluence with Barton Creek Tributary 39-3	12090205	0.3		N	A	February 2013
Barton Creek Tributary 1	Hays County, Unincorporated Areas	At confluence with Barton Creek	At confluence with Barton Creek Tributary 39-3	12090205	1.8		N	AE	August 2014
Barton Creek Tributary 2	Hays County, Unincorporated Areas	At confluence with Barton Creek	Approximately 4220 feet upstream of Hart Lane	12090205	1.9		Y	AE	August 2014
Barton Creek Tributary 2-1	Hays County, Unincorporated Areas	At confluence with Barton Creek Tributary 2	Approximately 770 feet upstream of Bells Springs Road	12090205	0.9		Y	AE	August 2014
Barton Creek Tributary 3	Hays County, Unincorporated Areas	At confluence with Barton Creek	Approximately 5450 feet upstream of Bells Springs Road	12090205	1.8		Y	AE	August 2014
Barton Creek Tributary 39-1	Hays County, Unincorporated Areas	At confluence with Barton Creek Tributary 1	Approximately 1350 feet upstream of Barton Creek Tributary	12090205	0.3		N	A	February 2013

Table 2: Flooding Sources Included in this FIS Report, (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi ²) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Barton Creek Tributary 39-2	Hays County, Unincorporated Areas	At confluence with Barton Creek	Approximately 2150 feet upstream of W Fitzhugh Road	12090205	0.7		N	A	February 2013
Barton Creek Tributary 39-3	Hays County, Unincorporated Areas	At confluence with Barton Creek Tributary 1	Approximately 1750 feet upstream of Barton Creek Tributary 1 confluence	12090205	0.3		N	A	February 2013
Barton Creek Tributary 40	Hays County, Unincorporated Areas	At confluence with Barton Creek	Approximately 2000 feet upstream of Barton Creek confluence	12090205	0.4		N	A	February 2013
Bear Creek	Austin, City of; Hays County, Unincorporated Areas	Hays County boundary	Approximately 1970 feet upstream of Wildwood Hills Lane	12090205	7.3		Y	AE	August 2014
Bear Creek	Hays County, Unincorporated Areas	At upstream limit of Bear Creek detailed study	Approximately 2250 feet upstream of Aspen Drive	12090205	1.9		N	A	August 2014
Bear Creek Tributary 1	Hays County, Unincorporated Areas	At Hays County political boundary	Approximately 3650 feet upstream of Hays County political boundary	12090205	0.7		N	A	February 2013
Bear Creek Tributary 1A	Bear Creek, Village of; Hays County, Unincorporated Areas	At confluence with Bear Creek Tributary 1	Approximately 2060 feet upstream of Signal Hill View	12090205	2.3		Y	AE	August 2014
Bear Creek Tributary 1B	Hays County, Unincorporated Areas	At Hays County political boundary	Approximately 1000 feet upstream of Old Baldy Trail	12090205	0.4		N	A	February 2013

Table 2: Flooding Sources Included in this FIS Report, (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi ²) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Bear Creek Tributary 1B-1	Hays County, Unincorporated Areas	At confluence with Bear Creek Tributary 1B	Approximately 1100 feet upstream of confluence with Bear Creek Tributary 1B	12090205	0.2		N	A	February 2013
Bear Creek Tributary 3	Hays County, Unincorporated Areas	At confluence with Bear Creek	Approximately 3675 feet upstream of FM 1826	12090205	1.0		N	A	February 2013
Bear Creek Tributary 4	Hays County, Unincorporated Areas	At confluence with Bear Creek	Approximately 5500 feet upstream of Crosscreek Drive	12090205	1.8		N	A	February 2013
Bear Creek Tributary 5	Hays County, Unincorporated Areas	At confluence with Bear Creek	Approximately 1400 feet upstream of Signal Hill Road	12090205	1.8		N	A	February 2013
Bear Creek Tributary 5-1	Hays County, Unincorporated Areas	At confluence with Bear Creek Tributary 5	Approximately 1400 feet upstream of Signal Hill Road	12090205	0.7		N	A	February 2013
Bear Creek Tributary 6	Hays County, Unincorporated Areas	At confluence with Bear Creek	Approximately 2400 feet upstream of confluence with Bear Creek	12090205	0.5		N	A	February 2013
Bear Creek Tributary 7	Hays County, Unincorporated Areas	At confluence with Bear Creek	Approximately 5000 feet upstream of Belterra Drive	12090205	1.5		N	A	February 2013
Bear Creek Tributary 7-1	Hays County, Unincorporated Areas	At confluence with Bear Creek Tributary 7	Approximately 1700 feet upstream of the confluence with Bear Creek Tributary 7	12090205	0.3		N	A	February 2013
Bear Creek Tributary A	Hays County, Unincorporated Areas	At confluence with Bear Creek	Approximately 5620 feet upstream of the confluence with Bear Creek	12090205	1.1		N	A	February 2013

Table 2: Flooding Sources Included in this FIS Report, (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi ²) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Blanco-San Marcos Overflow	Hays County, Unincorporated Areas; San Marcos, City of	From divergence with Blanco River downstream of Martindale Road	Convergence with San Marcos River approximately 2500 feet upstream of Blanco/San Marcos confluence	12100203	0.8		N	AO	February 2013
Blanco Gardens Overflow	San Marcos, City of	From divergence with Blanco River downstream of State Highway 80	Convergence with San Marcos River approximately 600 feet upstream of Cape Road	12100203	1.1		N	AO	8/31/2016
Blanco River	Hays County, Unincorporated Areas; San Marcos, City of; Wimberley, Village of	Approximately 1.2 miles upstream of Post Road	At the Hays County Line	12100203	51.4		Y	AE	8/31/2016
Blanco River Overflow Upstream of I-35	Hays County, Unincorporated Areas; San Marcos, City of	From divergence with Blanco River approximately 700 feet upstream of Interstate 35	Confluence with Blanco River approximately 1600 feet upstream of Uhland Road	12100203	1.2		Y	AE	8/31/2016
Brushy Creek	Niederwald, City of; Hays County, Unincorporated Areas; Uhland, Township of;	Approximately 5,770 feet downstream of the Hays County boundary	Approximately 1,150 feet upstream of Satterwhite Road	12100203	9.0		Y	AE	June 1995
Bypass Creek	Hays County, Unincorporated Areas; San Marcos, City of	Confluence with San Marcos River	Approximately 2 miles upstream of Harris Hill Road	12100203	6.6		Y	AE	8/31/2016

Table 2: Flooding Sources Included in this FIS Report, (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi ²) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Cambrian Branch	Hays County, Unincorporated Areas	At confluence with Barton Creek	Approximately 3400 feet upstream of confluence with Cambrian Branch Tributary 1	12090205	2.9		Y	AE	August 2014
Cambrian Branch Tributary 1	Hays County, Unincorporated Areas	At confluence with Cambrian Branch	Approximately 1980 feet upstream of confluence with Cambrian Branch	12090205	0.4		Y	AE	August 2014
Cottonwood Branch (Tributary to Roy Branch)	Hays County, Unincorporated Areas	At confluence with Roy Branch	Approximately 1010 feet upstream of Hidden Hills Drive	12090205	1.5		Y	AE	August 2014
Cottonwood Branch (Tributary to Onion Creek)	Hays County, Unincorporated Areas	At confluence with Onion Creek	Approximately 1220 feet upstream of Loop 165	12090205	0.4		N	A	August 2014
Cottonwood Creek	Hays County, Unincorporated Areas; San Marcos, City of	Approximately 0.1 miles downstream of Old Bastrop Road	Approximately 380 feet downstream of E McCarty Lane	12100203	1.1		Y	AE	5/31/2016
Cottonwood Creek	Hays County, Unincorporated Areas; San Marcos, City of	Approximately 380 feet downstream of E McCarty Lane	Approximately 180 feet upstream of Centerpoint Road	12100203	2.6		Y	AE	June 1995
Cypress Creek	Hays County, Unincorporated Areas; Woodcreek, City of; Wimberley, Village of; Woodcreek, City of	Confluence with Blanco River	Approximately 3.7 miles upstream of Pump Station Road	12100203	15.2		Y	AE	4/30/2016

Table 2: Flooding Sources Included in this FIS Report, (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi ²) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Dripping Springs	Hays County, Unincorporated Areas	At confluence with Onion Creek	Approximately 4160 feet upstream of Mercer Street	12090205	1.7		N	AE	August 2014
Dripping Springs Tributary	Dripping Springs, City of; Hays County, Unincorporated Areas	At confluence with Drippings Springs	Approximately 130 feet downstream of Youth Sports Association Road	12090205	0.7		N	AE	August 2014
Eskew Branch	Hays County, Unincorporated Areas	At confluence with Onion Creek	Approximately 700 feet downstream of FM 165	12090205	1.3		N	A	February 2013
Fitzhugh Creek	Hays County, Unincorporated Areas	At confluence with Barton Creek	Approximately 3800 feet downstream of Bell Springs Road	12090205	3.8		N	A	August 2014
Fitzhugh Creek Tributary 1	Hays County, Unincorporated Areas	At confluence with Fitzhugh Creek	Approximately 3450 feet upstream of W Fitzhugh Road	12090205	1.2		N	A	February 2015
Fitzhugh Creek Tributary 2	Hays County, Unincorporated Areas	At confluence with Fitzhugh Creek	Approximately 3450 feet upstream of Fitzhugh Creek	12090205	0.7		N	A	February 2015
Fitzhugh Creek Tributary 3	Hays County, Unincorporated Areas	At confluence with Fitzhugh Creek	Approximately 2500 feet upstream of Fitzhugh Creek	12090205	0.5		N	A	February 2015
Flat Creek	Hays County, Unincorporated Areas	At confluence with Onion Creek	Approximately 11500 feet upstream of Covered Bridge Drive	12090205	5.1		N	A	August 2014
Freestone Branch	Hays County, Unincorporated Areas	At confluence with South Onion Creek	Approximately 9100 feet upstream of confluence with South Onion Creek	12090205	1.7		N	A	August 2014

Table 2: Flooding Sources Included in this FIS Report, (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi ²) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Garlic Creek	Buda, City of; Hays County, Unincorporated Areas	At Hays County political boundary	Approximately 2855 feet upstream of Maybrook Drive	12090205	5.5		N	AE	August 2014
Garlic Creek Tributary	Buda, City of; Hays County, Unincorporated Areas	At confluence with Garlic Creek	Approximately 155 feet upstream of Remuda Trail	12090205	0.9		N	AE	August 2014
Gatlin Creek	Hays County, Unincorporated Areas	At confluence with Onion Creek	Approximately 1880 feet downstream of FM 12	12090205	2.9		N	A	August 2014
Grooms Branch	Hays County, Unincorporated Areas	At confluence with South Onion Creek	Approximately 3000 feet upstream of Pursley Road	12090205	1.8		N	A	August 2014
Grooms Branch Tributary 1	Hays County, Unincorporated Areas	At the confluence with Grooms Branch	Approximately 700 feet upstream of the confluence with Grooms Branch	12090205	0.1		N	A	February 2013
Hog Creek	Hays County, Unincorporated Areas; Wimberley, Village of; Woodcreek, City of	At confluence with Cypress Creek	At FM 12	12100203	2.0		Y	AE	4/30/2016
Hog Creek Overflow	Woodcreek, City of	At the convergence with Hog Creek	At the divergence with Hog Creek	12100203	0.1		N	A	4/30/2016
Jackson Branch	Hays County, Unincorporated Areas	At confluence with Onion Creek	Approximately 4200 feet upstream of Cross Creek	12090205	3.8		N	A	August 2014

Table 2: Flooding Sources Included in this FIS Report, (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi ²) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Jackson Branch Tributary	Hays County, Unincorporated Areas	At confluence with Jackson Branch	Approximately 6400 feet upstream of the confluence with Jackson Branch	12090205	1.2		N	A	February 2013
Little Barton Creek	Dripping Springs, City of; Hays County, Unincorporated Areas	At confluence with Barton Creek	Approximately 2620 feet upstream of Springlake Drive	12090205	4.6		Y	AE	August 2014
Little Bear Creek	Hays County, Unincorporated Areas	Hays County boundary	Approximately 2,700 feet upstream of Arbor Trail	12090205	7.6		Y	AE	June 1995
Little Bear Creek	Hays County, Unincorporated Areas	Approximately 2,700 feet upstream of Arbor Trail	Approximately 12000 feet upstream of FM 967	12090205	5.8		N	A	August 2014
Little Bear Creek Tributary 1	Hays County, Unincorporated Areas	Approximately 500 feet downstream of Chaparral Road	Approximately 13500 feet upstream of Chaparral Road	12090205	2.7		N	A	August 2014
Little Bear Creek Tributary 1-1	Hays County, Unincorporated Areas	At the confluence of Little Bear Creek Tributary 1	Approximately 5350 feet upstream of the confluence of Little Bear Creek Tributary 1	12090205	1.0		N	A	February 2013
Little Bear Creek Tributary 1-2	Hays County, Unincorporated Areas	At the confluence of Little Bear Creek Tributary 1	Approximately 1700 feet upstream of the confluence of Little Bear Creek Tributary 1	12090205			N	A	February 2013
Little Bear Creek Tributary 1A	Hays County, Unincorporated Areas; Hays, City of	At the confluence of Little Bear Creek	Approximately 3800 feet upstream of FM 1626	12090205			N	A	February 2013

Table 2: Flooding Sources Included in this FIS Report, (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi ²) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Little Bear Creek Tributary 2	Hays County, Unincorporated Areas	At the confluence of Little Bear Creek	Approximately 10100 feet upstream of the confluence of Little Bear Creek	12090205			N	A	August 2014
Little Bear Creek Tributary 2-1	Hays County, Unincorporated Areas	At the confluence of Little Bear Creek Tributary 2	Approximately 5900 feet upstream of the confluence of Little Bear Creek Tributary 2	12090205			N	A	February 2013
Little Bear Creek Tributary 2A	Hays County, Unincorporated Areas	At the confluence of Little Bear Creek	Approximately 8900 feet upstream of the confluence of Little Bear Creek	12090205			N	A	February 2013
Little Bear Creek Tributary 2B	Hays County, Unincorporated Areas	At the confluence of Little Bear Creek	Approximately 4380 feet upstream of the confluence of Little Bear Creek	12090205			N	A	February 2013
Little Bear Creek Tributary 3	Hays County, Unincorporated Areas	At the confluence of Little Bear Creek	Approximately 2900 feet upstream of the confluence of Little Bear Creek	12090205			N	A	February 2013
Little Bear Creek Tributary 4	Hays County, Unincorporated Areas	At the confluence of Little Bear Creek	Approximately 2500 feet upstream of the confluence of Little Bear Creek	12090205			N	A	February 2013
Little Bear Creek Tributary 5	Hays County, Unincorporated Areas	At the confluence of Little Bear Creek	Approximately 1550 feet upstream of the confluence of Little Bear Creek	12090205			N	A	February 2013
Little Bear Creek Tributary 6	Hays County, Unincorporated Areas	At the confluence of Little Bear Creek	Approximately 3100 feet upstream of the confluence of Little Bear Creek	12090205			N	A	February 2013
Little Bear Creek Tributary 7	Hays County, Unincorporated Areas	At the confluence of Little Bear Creek	Approximately 3400 feet upstream of the confluence of Little Bear Creek	12090205			N	A	February 2013

Table 2: Flooding Sources Included in this FIS Report, (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi ²) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Loneman Creek	Hays County, Unincorporated Areas	Confluence with the Blanco River	Approximately 11,030 feet upstream of Deer Lake Estates Road	12100203	7.9		Y	AE	June 1995
Long Branch	Hays County, Unincorporated Areas	Approximately 360 feet downstream of Hays County political boundary	Approximately 650 feet downstream of Pemberton Way	12090205	2.0		Y	AE	August 2014
Long Branch 2 Tributary 1	Hays County, Unincorporated Areas	At the confluence of Long Branch	Approximately 1550 feet upstream of the confluence of Long Branch	12090205	0.3		N	A	August 2014
Long Branch 2 Tributary 2	Dripping Springs, City of; Hays County, Unincorporated Areas	At the confluence of Long Branch	Approximately 2400 feet upstream of the confluence of Long Branch	12090205	0.5		N	A	August 2014
Long Branch 2 Tributary 2-1	Dripping Springs, City of; Hays County, Unincorporated Areas	At the confluence of Long Branch 2 Tributary 2	Approximately 600 feet upstream of the confluence of Long Branch 2 Tributary 2	12090205	0.1		N	A	August 2014
Millseat Branch	Hays County, Unincorporated Areas	At the confluence of Onion Creek	Approximately 3000 feet upstream of US 290	12090205	2.7		N	A	August 2014
Mustang Branch	Hays County, Unincorporated Areas	At the confluence of Onion Creek	At FM 150	12090205	8.6		N	A	August 2014
Mustang Branch Tributary 1	Hays County, Unincorporated Areas; Kyle, City of	At the confluence of Mustang Branch	At Jack C Hays Trail	12090205	0.8		N	A	February 2013

Table 2: Flooding Sources Included in this FIS Report, (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi ²) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Mustang Branch Tributary 2	Hays County, Unincorporated Areas	At the confluence of Mustang Branch	Approximately 3675 feet upstream of Indian Creek Road	12090205	1.5		N	A	February 2013
Mustang Branch Tributary 2-1	Hays County, Unincorporated Areas; Mountain City, City of	At the confluence of Mustang Branch Tributary 2	At Maple Drive	12090205	0.5		N	A	February 2013
Mustang Branch Tributary 3	Hays County, Unincorporated Areas	At the confluence of Mustang Branch	Approximately 2525 feet upstream of the confluence of Mustang Branch	12090205	0.5		N	A	August 2014
Mustang Branch Tributary 4	Hays County, Unincorporated Areas	At the confluence of Mustang Branch	Approximately 2350 feet upstream of the confluence of Mustang Branch	12090205	0.4		N	A	February 2013
Mustang Branch Tributary 5	Hays County, Unincorporated Areas	At the confluence of Mustang Branch	Approximately 2075 feet upstream of the confluence of Mustang Branch	12090205	0.4		N	A	February 2013
Mustang Branch Tributary 6	Hays County, Unincorporated Areas	At the confluence of Mustang Branch	Approximately 4525 feet upstream of the confluence of Mustang Branch	12090205	0.9		N	A	February 2013
Mustang Branch Tributary 7	Hays County, Unincorporated Areas	At the confluence of Mustang Branch	Approximately 1725 feet upstream of the confluence of Mustang Branch	12090205	0.3		N	A	February 2013
North Gatlin Creek	Hays County, Unincorporated Areas	At the confluence of Gatlin Creek	At Mt Olive School Road	12090205	4.3		N	A	August 2014
NRCS Dam 1 Spillway	Hays County, Unincorporated Areas	Confluence with Sink Creek	Approximately 0.64 miles upstream of Sink Creek confluence	12100203	0.6		N	A	8/31/2016

Table 2: Flooding Sources Included in this FIS Report, (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi ²) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
NRCS Dam 2 Spillway	Hays County, Unincorporated Areas	Confluence with Pope Creek	Approximately 0.31 miles upstream of Pope Creek confluence	12100203	0.3		N	A	8/31/2016
NRCS Dam 3 Spillway	San Marcos, City of	Confluence with Sink Creek	Approximately 0.32 miles upstream of Sink Creek confluence	12100203	0.3		N	A	8/31/2016
NRCS Dam 4 Spillway	Hays County, Unincorporated Areas	Confluence with Purgatory Creek	Approximately 0.23 miles upstream of Purgatory Creek confluence	12100203	0.2		N	A	8/31/2016
NRCS Dam 5 Spillway	San Marcos, City of	Confluence with Purgatory Creek at Wonder World Drive	Approximately 0.61 miles upstream of Purgatory Creek confluence	12100203	0.6		N	A	8/31/2016
Onion Creek	Buda, City of; Hays County, Unincorporated Areas	At confluence with Colorado River	Approximately 700 feet upstream of confluence with Onion Creek Tributary 22	12090205	39.1		Y	AE	August 2014
Onion Creek	Hays County, Unincorporated Areas	At the Upstream limit of the detailed portion of Onion Creek	At Hays County political boundary	12090205	10.2		N	A	February 2013
Onion Creek Tributary 1	Hays County, Unincorporated Areas	At the confluence of Onion Creek	At N Loop 4	12090205	0.4		N	A	August 2014
Onion Creek Tributary 2	Buda, City of; Hays County, Unincorporated Areas	At the confluence of Onion Creek	Approximately 2350 feet upstream of N Loop 4	12090205	1.8		N	A	August 2014
Onion Creek Tributary 3	Hays County, Unincorporated Areas	At the confluence of Onion Creek	Approximately 9500 feet upstream of the confluence of Onion Creek	12090205	1.8		N	A	February 2013

Table 2: Flooding Sources Included in this FIS Report, (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi ²) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Onion Creek Tributary 4	Hays County, Unincorporated Areas	At the confluence of Onion Creek	Approximately 4750 feet upstream of the confluence of Onion Creek	12090205	0.9		N	A	February 2013
Onion Creek Tributary 5	Hays County, Unincorporated Areas	At the confluence of Onion Creek	Approximately 4 miles upstream of the confluence of Onion Creek	12090205	4.0		N	A	August 2014
Onion Creek Tributary 5-1	Hays County, Unincorporated Areas	At the confluence of Onion Creek Tributary 5	Approximately 3.1 miles upstream of the confluence of Orion Creek Tributary 5	12090205	3.1		N	A	August 2014
Onion Creek Tributary 5-1-1	Hays County, Unincorporated Areas	At the confluence of Onion Creek Tributary 5-1	Approximately 3100 feet upstream of the confluence of Orion Creek Tributary 5-1	12090205	0.6		N	A	February 2013
Onion Creek Tributary 6	Hays County, Unincorporated Areas	At the confluence of Onion Creek	Approximately 4800 feet upstream of the confluence of Onion Creek	12090205	0.9		N	A	February 2013
Onion Creek Tributary 7	Hays County, Unincorporated Areas	At the confluence of Onion Creek	Approximately 6350 feet upstream of the confluence of Onion Creek	12090205	1.2		N	A	February 2013
Onion Creek Tributary 8	Hays County, Unincorporated Areas	At the confluence of Onion Creek	Approximately 4875 feet upstream of the confluence of Onion Creek	12090205	0.9		N	A	February 2013
Onion Creek Tributary 8-1	Hays County, Unincorporated Areas	At the confluence of Onion Creek Tributary 8	Approximately 2000 feet upstream of the confluence of Orion Creek Tributary 8	12090205	0.4		N	A	February 2013
Onion Creek Tributary 8-1-1	Hays County, Unincorporated Areas	At the confluence of Onion Creek Tributary 8-1	Approximately 1650 feet upstream of the confluence of Orion Creek Tributary 8-1	12090205	0.3		N	A	February 2013

Table 2: Flooding Sources Included in this FIS Report, (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi ²) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Onion Creek Tributary 9	Hays County, Unincorporated Areas	At the confluence of Onion Creek	Approximately 2400 feet upstream of the confluence of Onion Creek	12090205	0.5		N	A	February 2013
Onion Creek Tributary 10	Hays County, Unincorporated Areas	At the confluence of Onion Creek	Approximately 6275 feet upstream of the confluence of Onion Creek	12090205	1.2		N	A	February 2013
Onion Creek Tributary 11	Hays County, Unincorporated Areas	At the confluence of Onion Creek	Approximately 2550 feet upstream of the confluence of Onion Creek	12090205	0.5		N	A	August 2014
Onion Creek Tributary 12	Hays County, Unincorporated Areas	At the confluence of Onion Creek	Approximately 3150 feet upstream of the confluence of Onion Creek	12090205	0.6		N	A	February 2013
Onion Creek Tributary 13	Hays County, Unincorporated Areas	At the confluence of Onion Creek	Approximately 3250 feet upstream of the confluence of Onion Creek	12090205	0.6		N	A	February 2013
Onion Creek Tributary 14	Hays County, Unincorporated Areas	At the confluence of Onion Creek	Approximately 4450 feet upstream of the confluence of Onion Creek	12090205	0.8		N	A	February 2013
Onion Creek Tributary 14-1	Hays County, Unincorporated Areas	At the confluence of Onion Creek Tributary 14	Approximately 1350 feet upstream of the confluence of Onion Creek Tributary 14	12090205	0.3		N	A	February 2013
Onion Creek Tributary 15	Hays County, Unincorporated Areas	At the confluence of Onion Creek	Approximately 2800 feet upstream of the confluence of Onion Creek	12090205	0.5		N	A	February 2013
Onion Creek Tributary 16	Hays County, Unincorporated Areas	At the confluence of Onion Creek	Approximately 1500 feet upstream of FM 1826	12090205	3.5		N	A	August 2014

Table 2: Flooding Sources Included in this FIS Report, (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi ²) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Onion Creek Tributary 16-1	Hays County, Unincorporated Areas	At the confluence of Onion Creek Tributary 16	At FM 1826	12090205	0.6		N	A	February 2013
Onion Creek Tributary 17	Hays County, Unincorporated Areas	At the confluence of Onion Creek	Approximately 4000 feet upstream of the confluence of Onion Creek	12090205	0.8		N	A	February 2013
Onion Creek Tributary 18	Hays County, Unincorporated Areas	At the confluence of Onion Creek	Approximately 2850 feet upstream of the confluence of Onion Creek	12090205	0.5		N	A	August 2014
Onion Creek Tributary 19	Hays County, Unincorporated Areas	At the confluence of Onion Creek	Approximately 5375 feet upstream of the confluence of Onion Creek	12090205	1.0		N	A	August 2014
Onion Creek Tributary 20	Hays County, Unincorporated Areas	At the confluence of Onion Creek	Approximately 1000 feet upstream of Trebbled Waters Trail	12090205	0.4		N	A	August 2014
Onion Creek Tributary 21	Dripping Springs, City of; Hays County, Unincorporated Areas	At the confluence of Onion Creek	Approximately 6000 feet upstream of Onion Creek	12090205	1.1		N	A	August 2014
Onion Creek Tributary 22	Hays County, Unincorporated Areas	At the confluence of Onion Creek	Approximately 1700 feet upstream of the confluence of Onion Creek	12090205	0.3		N	A	February 2013
Onion Creek Tributary 23	Hays County, Unincorporated Areas	At the confluence of Onion Creek	Approximately 5275 feet upstream of the confluence of Onion Creek	12090205	1.0		N	A	February 2013
Onion Creek Tributary 24	Hays County, Unincorporated Areas	At the confluence of Onion Creek	Approximately 6575 feet upstream of the confluence of Onion Creek	12090205	1.2		N	A	February 2013

Table 2: Flooding Sources Included in this FIS Report, (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi ²) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Pier Branch	Hays County, Unincorporated Areas	At the confluence of Onion Creek	At Huck Finn Trail	12090205	3.8		N	A	August 2014
Plum Creek	Hays County, Unincorporated Areas; Kyle, City of; Uhland, Township of	Township of Uhland corporate boundary	Approximately 4,550 feet upstream of the Union Pacific Railroad	12100203	11.3		Y	AE	June 1995
Pope Creek	Hays County, Unincorporated Areas	At the confluence with Sink Creek	Approximately 0.3 miles upstream of NRCS Dam No.2	12100203	1.0		Y	AE	8/31/2016
Purgatory Creek	Hays County, Unincorporated Areas; San Marcos, City of	At the confluence with the San Marcos River	Approximately 3.8 miles upstream of NRCS Dam No.2	12100203	12.5		Y	AE	8/31/2016
Purgatory Creek Diversion 1	San Marcos, City of	At the convergence of Purgatory Creek	At the Divergence of Purgatory Creek	12100203	1.2		Y	AE	8/31/2016
Purgatory Creek UNT	Hays County, Unincorporated Areas; San Marcos, City of	At the confluence with Stream PC-3	Approximately 13400 feet upstream of the confluence with Stream PC-3	12100203	2.5		N	A	8/31/2016
Purgatory Middle Diversion	San Marcos, City of	At the confluence with Purgatory Creek	Divergence with Purgatory Creek at Hunter Road	12100203	0.5		N	A	8/31/2016
Richmond Branch	Hays County, Unincorporated Areas; Kyle, City of	Approximately 400 feet upstream of Dacy Ln	At Windy Hill Road	12100203	0.7		N	AE	1/25/2007
Rocky Branch	Hays County, Unincorporated Areas	At the confluence with Onion Creek	Approximately 4575 feet upstream of La Ventana Parkway	12090205	4.0		N	A	August 2014

Table 2: Flooding Sources Included in this FIS Report, (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi ²) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Roy Branch	Hays County, Unincorporated Areas	At the confluence with Barton Creek	Approximately 2410 feet upstream of N Canyonwood Drive	12090205	2.7		Y	AE	August 2014
San Marcos River	Hays County, Unincorporated Areas;	Hays County boundary	Approximately 0.56 miles downstream of Blanco/San Marcos confluence	12100203	2.1		Y	AE	8/31/2016
San Marcos River	Hays County, Unincorporated Areas; San Marcos, City of	Approximately 0.56 miles downstream of Blanco/San Marcos confluence	Approximately 0.3 miles upstream of Lime Kiln Road	12100203	6.5		Y	AE	8/31/2016
San Marcos Tributary	Hays County, Unincorporated Areas	At the confluence with San Marcos River	Approximately 2.7 miles upstream of San Marcos River confluence	12100203	2.7		N	A	8/31/2016
Sessom Creek	San Marcos, City of	At the confluence with San Marcos River	Approximately 0.1 miles upstream of West Sessom Drive	12100203	0.4		N	A	8/31/2016
Sink Creek	Hays County, Unincorporated Areas; San Marcos, City of	At the confluence with the San Marcos River	Approximately 0.3 miles upstream of Ranch Road 12	12100203	11.7		Y	AE	8/31/2016
Smith Creek	Hays County, Unincorporated Areas; Wimberley, Village of	At the confluence with Loneman Creek	Approximately 4,680 feet upstream of Deer Lake Road/FM 3237	12100203	2.5		Y	AE	June 1995
South Gatlin Creek	Hays County, Unincorporated Areas	At the confluence with Gatlin Creek	Approximately 10600 feet upstream of FM 12	12090205	3.7		N	A	August 2014

Table 2: Flooding Sources Included in this FIS Report, (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi ²) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
South Gatlin Creek Tributary 1	Hays County, Unincorporated Areas	At the confluence with South Gatlin Creek	Approximately 2900 feet upstream of the confluence with South Gatlin Creek	12090205	0.6		N	A	February 2013
South Gatlin Creek Tributary 2	Hays County, Unincorporated Areas	At the confluence with South Gatlin Creek	Approximately 4675 feet upstream of the confluence with South Gatlin Creek	12090205	0.9		N	A	February 2013
South Gatlin Creek Tributary 3	Hays County, Unincorporated Areas	At the confluence with South Gatlin Creek	Approximately 4850 feet upstream of the confluence with South Gatlin Creek	12090205	0.9		N	A	February 2013
South Onion Creek	Hays County, Unincorporated Areas	At the confluence with Onion Creek	Approximately 18000 feet upstream of the confluence with Freestone Branch	12090205	14.8		N	A	August 2014
South Onion Creek Tributary 1	Hays County, Unincorporated Areas	At the confluence with South Onion Creek	Approximately 2350 feet upstream of the confluence with South Onion Creek	12090205	0.4		N	A	August 2014
South Onion Creek Tributary 2	Hays County, Unincorporated Areas	At the confluence with South Onion Creek	Approximately 4825 feet upstream of the confluence with South Onion Creek	12090205	0.9		N	A	February 2013
South Onion Creek Tributary 3	Hays County, Unincorporated Areas	At the confluence with South Onion Creek	Approximately 1700 feet upstream of the confluence with South Onion Creek	12090205	0.3		N	A	August 2014
Spring Branch	Kyle, City of; Hays County, Unincorporated Areas	Approximately 1,500 feet upstream of the confluence with Plum Creek	Approximately 1,125 feet upstream of Spring Branch Drive	12100203	0.9		Y	AE	June 1995
Spring Hollow	Hays County, Unincorporated Areas	At the confluence with Bear Creek	Approximately 4400 feet upstream of Cool Spring Way	12090205	4.8		N	A	February 2013

Table 2: Flooding Sources Included in this FIS Report, (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi ²) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Spring Hollow Tributary 1	Hays County, Unincorporated Areas	At the confluence with Spring Hollow	Approximately 1700 feet upstream of the confluence of Spring Hollow	12090205	0.3		N	A	February 2013
Spring Hollow Tributary 2	Hays County, Unincorporated Areas	At the confluence with Spring Hollow	Approximately 3425 feet upstream of the confluence of Spring Hollow	12090205	0.6		N	A	February 2013
Spring Hollow Tributary 3	Hays County, Unincorporated Areas	At the confluence with Spring Hollow	Approximately 4600 feet upstream of the confluence of Spring Hollow	12090205	0.9		N	A	February 2013
Stream Bear 1	Bear Creek, Village of; Hays County, Unincorporated Areas	At confluence with Bear Creek	Approximately 1200 feet upstream of N Madrone Trail	12090205	1.5		Y	AE	September 1990
Stream Bear 2	Hays County, Unincorporated Areas	At confluence with Bear Creek	Approximately 1500 feet upstream of Reunion Boulevard	12090205	0.9		Y	AE	September 1990
Stream BPC-1	Hays County, Unincorporated Areas; San Marcos, City of	At the confluence with Bypass Creek	At West Uhland Road	12100203	0.4		Y	AE	8/31/2016
Stream BPC-2	Hays County, Unincorporated Areas	At the confluence with Bypass Creek	Approximately 0.4 miles upstream of State Highway 21	12100203	0.9		Y	AE	8/31/2016
Stream Brushy-1	Hays County, Unincorporated Areas; Niederwald, City of	Confluence with Brushy Creek	Approximately 670 feet upstream of County Road 131/Windy Hill Road	12100203	4.7		Y	AE	June 1995

Table 2: Flooding Sources Included in this FIS Report, (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi ²) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Stream Brushy-1A	Hays County, Unincorporated Areas	Confluence with Stream Brushy-1	Approximately 2,660 feet upstream of County Road 125	12100203	1.0		Y	AE	June 1995
Stream CC-1	San Marcos, City of	At the confluence with Cottonwood Creek	Approximately 0.5 miles upstream of Interstate Highway 35	12100203	2.2		Y	AE	8/31/2016
Stream CC-1 South	San Marcos, City of	At the confluence with Stream CC-1	Approximately 1900 feet upstream of the confluence with Stream CC-1	12100203	0.4		Y	AE	8/31/2016
Stream CC-2	Hays County, Unincorporated Areas; San Marcos, City of	Union Pacific Railroad	Approximately 0.3 miles upstream of Hunter Road	12100203	0.6		Y	AE	June 1995
Stream CC-2D	Hays County, Unincorporated Areas; San Marcos, City of	Confluence with Cottonwood Creek	Approximately 145 feet upstream of I-35 South Bound/Frontage Road	12100203	0.3		Y	AE	June 1995
Stream CC-IH35	Hays County, Unincorporated Areas; San Marcos, City of	Confluence with Stream CC-1	Approximately 5,250 feet upstream of McCarty Lane/County Road 233	12100203	1.5		Y	AE	8/15/2008
Stream Cypress-1	Hays County, Unincorporated Areas	Confluence with Cypress Creek	Approximately 3,850 feet upstream of Valley Spring Road	12100203	1.4		Y	AE	June 1995
Stream LB-1	Austin, City of; Hays County, Unincorporated Areas	At the downstream limit of Little Bear Creek	Approximately 1100 feet upstream of Chaparral Lane	12090205			Y	AE	June 1995

Table 2: Flooding Sources Included in this FIS Report, (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi ²) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Stream PC-1	Hays County, Unincorporated Areas; San Marcos, City of	At the confluence with Purgatory Creek	Approximately 1.1 miles upstream of McCarty Lane	12100203	2.6		Y	AE	3/30/2015
Stream PC-3	San Marcos, City of	At the confluence with Purgatory Creek	Approximately 0.2 miles upstream of Castle Creek Road	12100203	1.7		N	A	8/31/2016
Stream Plum-1	Hays County, Unincorporated Areas; Kyle, City of	At the confluence with Plum Creek	Approximately 40 feet upstream of South Sledge Street	12100203	3.0		Y	AE	June 1995
Stream WSC-1	Hays County, Unincorporated Areas	At the confluence with Willow Springs Creek	Approximately 0.3 miles upstream of W McCarty Lane	12100203	0.6		Y	AE	8/31/2016
Stream WSC-1 Split	Hays County, Unincorporated Areas	At the Confluence with Stream WSC-1	Approximately 250 feet upstream of W McCarty Lane	12100203	0.2		N	A	8/31/2016
Stream WSC-RR	San Marcos, City of	At the convergence with Willow Springs Creek	At the divergence with Willow Springs Creek	12100203	0.6		Y	AE	8/31/2016
Tributary CC-1A	Hays County, Unincorporated Areas; Woodcreek, City of	At the confluence with Cypress Creek	Approximately 1 mile upstream of Mount Sharp Road	12100203	1.3		N	A	8/31/2016
Tributary CC-2A	Wimberley, Village of	At the confluence with Cypress Creek	Just downstream of Winters Mill Parkway	12100203	1.5		N	A	8/31/2016
Unnamed Tributary To Blanco River	Wimberley, Village of	Approximately 780 feet downstream of Deer Lake Road	Approximately 220 upstream of Deer Lake Road	12100203	0.2		N	AE	01/27/2011

Table 2: Flooding Sources Included in this FIS Report, (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi ²) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Unnamed Tributary 1 to Cedar Fork	Hays County, Unincorporated Areas	Approximately 4100 feet upstream of confluence with Cedar Fork	Approximately 5300 feet upstream of the downstream limit	12100203	1.0		N	A	June 1995
Unnamed Tributary 1 to Unnamed Tributary to Cedar Fork	Hays County, Unincorporated Areas	At the confluence with Unnamed Tributary 1 to Cedar Fork	Approximately 2000 feet upstream of the downstream limit	12100203	0.4		N	A	8/15/2008
Unnamed Tributary 2 to Unnamed Tributary to Cedar Fork	Hays County, Unincorporated Areas	Confluence with Unnamed Tributary 1 to Unnamed Tributary to Cedar Fork	Approximately 1,764 feet upstream of confluence with Unnamed Tributary 1 to Unnamed Tributary to Cedar Fork	12100203	.33		N	A	8/15/2008
Unnamed Tributary of Cypress Creek	Hays County, Unincorporated Areas	Confluence with Cypress Creek	Approximately 698 feet upstream of Shadow Valley	12100203	1.9		N	A	3/30/2015
Unnamed Tributary to Plum Creek	Hays County, Unincorporated Areas	Confluence with Plum Creek	Approximately 270 feet upstream of Arbor Knot Drive	12100203	0.75		N	AE	June 1995
Walnut Spring	Dripping Springs, City of	At Needham Road	Approximately 150 feet upstream of Founders Park Road	12090205	0.8		N	AE	August 2014
Walnut Spring	Dripping Springs, City of; Hays County, Unincorporated Areas	At the confluence with Onion Creek	Approximately 2000 feet upstream of Needham Road	12090205	1.4		N	A	August 2014

Table 2: Flooding Sources Included in this FIS Report, (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi ²) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
West Mustang Branch	Hays County, Unincorporated Areas	At the confluence with Onion Creek	Approximately 22650 feet upstream of the confluence with Onion Creek	12090205	4.3		N	A	August 2014
West Mustang Branch Tributary 1	Hays County, Unincorporated Areas	At the confluence with West Mustang Branch	Approximately 1350 feet upstream of the confluence with West Mustang Branch	12090205	0.3		N	A	August 2014
West Mustang Branch Tributary 2	Hays County, Unincorporated Areas	At the confluence with West Mustang Branch	Approximately 1200 feet upstream of the confluence with West Mustang Branch	12090205	0.2		N	A	August 2014
West Mustang Branch Tributary 3	Hays County, Unincorporated Areas	At the confluence with West Mustang Branch	Approximately 2500 feet upstream of the confluence with West Mustang Branch	12090205	0.5		N	A	August 2014
White Branch	Hays County, Unincorporated Areas	At the confluence with Onion Creek	Approximately 14400 feet upstream of the confluence with Onion Creek	12090205	2.7		N	A	August 2014
White Branch Tributary 1	Hays County, Unincorporated Areas	At the confluence with White Branch	Approximately 3125 feet upstream of the confluence with White Branch	12090205	0.6		N	A	February 2013
Willow Springs Creek	Hays County, Unincorporated Areas; San Marcos River, City of	At the confluence with San Marcos River	Approximately 2700 feet upstream of W McCarty Lane	12100203	5.2		Y	AE	8/31/2016
Willow Springs Creek Diversion	San Marcos River, City of	At the convergence of Willow Springs Creek	At the divergence of Willow Springs Creek	12100203	0.8		N	A	8/31/2016
Willow Springs Creek Lower Tributary	San Marcos River, City of	At the confluence with Willow Springs Creek	Approximately 1700 feet upstream of the confluence with Willow Springs Creek	12100203	0.3		N	A	8/31/2016

Table 2: Flooding Sources Included in this FIS Report, (continued)

Flooding Source	Community	Downstream Limit	Upstream Limit	HUC-8 Sub-Basin(s)	Length (mi) (streams or coastlines)	Area (mi ²) (estuaries or ponding)	Floodway (Y/N)	Zone shown on FIRM	Date of Analysis
Wilson Creek	Hays County, Unincorporated Areas	Confluence with the Blanco River	Approximately 6,945 feet upstream of the confluence with Stream WC-1	12100203	4.2		Y	AE	June 1995
Yorks Creek	Hays County, Unincorporated Areas	At the confluence with Onion Creek	Approximately 6400 feet upstream of Stepping Stone Crossing	12090205	8.0		N	A	August 2014
Yorks Creek Tributary 1	Hays County, Unincorporated Areas	At the confluence with Yorks Creek	Approximately 1750 feet upstream of the confluence of Yorks Creek	12090205	0.3		N	A	August 2014
Yorks Creek Tributary 2	Hays County, Unincorporated Areas	At the confluence with Yorks Creek	Approximately 5000 feet upstream of Rolling Oaks Drive	12090205	2.9		N	A	February 2013
Yorks Creek Tributary 3	Hays County, Unincorporated Areas	At the confluence with Yorks Creek	Approximately 6925 feet upstream of the confluence with Yorks Creek	12090205	1.3		N	A	February 2013

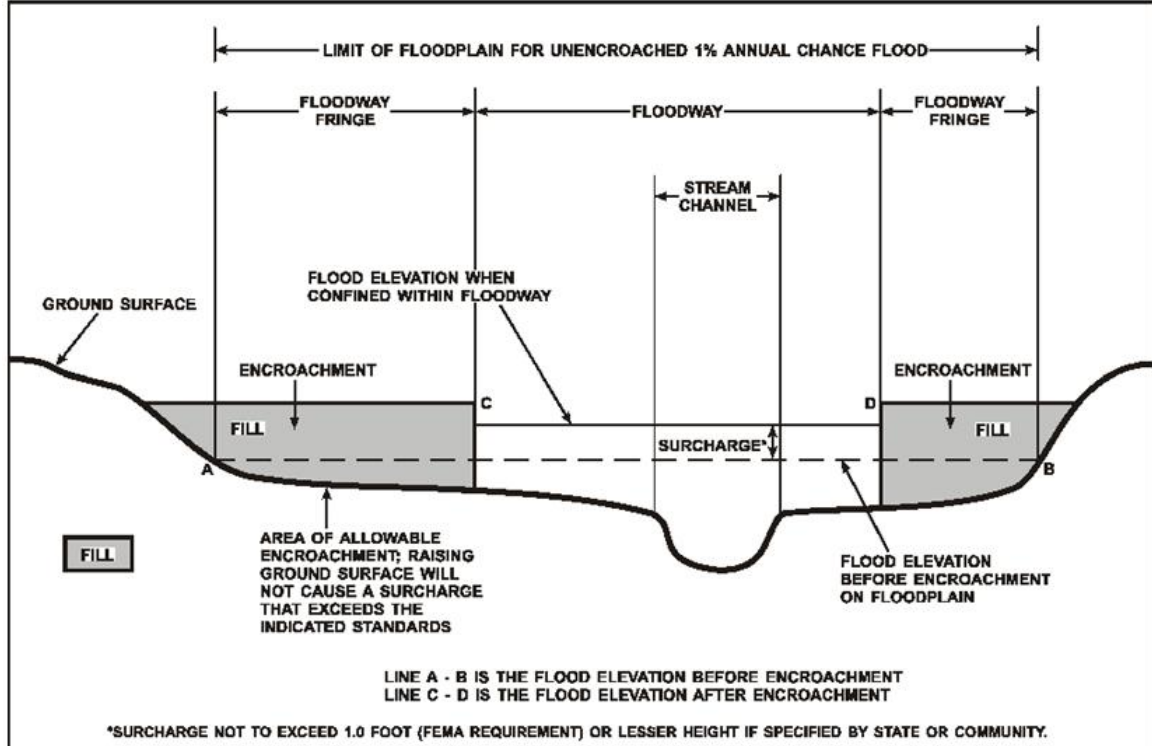
2.2 Floodways

Encroachment on floodplains, such as structures and fill, reduces flood-carrying capacity, increases flood heights and velocities, and increases flood hazards in areas beyond the encroachment itself. One aspect of floodplain management involves balancing the economic gain from floodplain development against the resulting increase in flood hazard.

For purposes of the NFIP, a floodway is used as a tool to assist local communities in balancing floodplain development against increasing flood hazard. With this approach, the area of the 1% annual chance floodplain on a river is divided into a floodway and a floodway fringe based on hydraulic modeling. The floodway is the channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment in order to carry the 1% annual chance flood. The floodway fringe is the area between the floodway and the 1% annual chance floodplain boundaries where encroachment is permitted. The floodway must be wide enough so that the floodway fringe could be completely obstructed without increasing the water surface elevation of the 1% annual chance flood more than 1 foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to floodplain development are shown in Figure 4: Floodway Schematic .

To participate in the NFIP, Federal regulations require communities to limit increases caused by encroachment to 1.0 foot, provided that hazardous velocities are not produced. The floodways in this project are presented to local agencies as minimum standards that can be adopted directly or that can be used as a basis for additional floodway projects.

Figure 4: Floodway Schematic



Floodway widths presented in this FIS Report and on the FIRM were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. For certain stream segments, floodways were adjusted so that the amount of floodwaters conveyed on each side of the floodplain would be reduced equally. The results of the floodway computations have been tabulated for selected cross sections and are shown in Table 24, "Floodway Data."

All floodways that were developed for this Flood Risk Project are shown on the FIRM using the symbology described in . In cases where the floodway and 1% annual chance floodplain boundaries are either close together or collinear, only the floodway boundary has been shown on the FIRM. For information about the delineation of floodways on the FIRM, refer to Section 6.3.

2.3 Base Flood Elevations

The hydraulic characteristics of flooding sources were analyzed to provide estimates of the elevations of floods of the selected recurrence intervals. The Base Flood Elevation (BFE) is the elevation of the 1% annual chance flood. These BFEs are most commonly rounded to the whole foot, as shown on the FIRM, but in certain circumstances or locations they may be rounded to 0.1 foot. Cross section lines shown on the FIRM may also be labeled with the BFE rounded to 0.1 foot. Whole-foot BFEs derived from engineering analyses that apply to coastal areas, areas of ponding, or other static areas with little elevation change may also be shown at selected intervals on the FIRM.

Cross sections with BFEs shown on the FIRM correspond to the cross sections shown in the Floodway Data table and Flood Profiles in this FIS Report. BFEs are primarily intended for flood insurance rating purposes. For construction and/or floodplain management purposes, users are cautioned to use the flood elevation data presented in this FIS Report in conjunction with the data shown on the FIRM.

2.4 Non-Encroachment Zones

This section is not applicable to this Flood Risk Project.

2.5 Coastal Flood Hazard Areas

This section is not applicable to this Flood Risk Project.

2.5.1 Water Elevations and the Effects of Waves

This section is not applicable to this Flood Risk Project.

Figure 5: Wave Runup Transect Schematic

[Not Applicable to this Flood Risk Project]

2.5.2 Floodplain Boundaries and BFEs for Coastal Areas

This section is not applicable to this Flood Risk Project.

2.5.3 Coastal High Hazard Areas

This section is not applicable to this Flood Risk Project.

Figure 6: Coastal Transect Schematic

[Not Applicable to this Flood Risk Project]

2.5.4 Limit of Moderate Wave Action

This section is not applicable to this Flood Risk Project.

SECTION 3.0 – INSURANCE APPLICATIONS

3.1 National Flood Insurance Program Insurance Zones

For flood insurance applications, the FIRM designates flood insurance rate zones as described in , “Map Legend for FIRM.” Flood insurance zone designations are assigned to flooding sources based on the results of the hydraulic or coastal analyses. Insurance agents use the zones shown on the FIRM and depths and base flood elevations in this FIS Report in conjunction with information on structures and their contents to assign premium rates for flood insurance policies.

The 1% annual chance floodplain boundary corresponds to the boundary of the areas of special flood hazards (e.g. Zones A, AE, V, VE, etc.), and the 0.2% annual chance floodplain boundary corresponds to the boundary of areas of additional flood hazards.

Table 3 lists the flood insurance zones in Hays County.

Table 3: Flood Zone Designations by Community

Community	Flood Zone(s)
Austin, City of	A, AE, X
Bear Creek, Village of	AE, X
Buda, City of	A, AE, X
Creedmoor, City of	A, X
Dripping Springs, City of	A, AE, X
Hays, City of	A, X
Hays County, Unincorporated Areas	A, AE, AO, X
Kyle, City of	A, AE, X
Mountain Ciy, City of	A, X
Niederwald, City of	A, AE, X
San Marcos, City of	A, AE, AO, X
Uhland, Township of	A, AE, X
Wimberley, Village of	A, AE, X
Woodcreek, City of	A, AE, X

3.2 Coastal Barrier Resources System

This section is not applicable to this Flood Risk Project.

Table 4: Coastal Barrier Resources System Information

[Not Applicable to this Flood Risk Project]

SECTION 4.0 – AREA STUDIED

4.1 Basin Description

Table 5 contains a description of the characteristics of the HUC-8 sub-basins within which each community falls. The table includes the main flooding sources within each basin, a brief description of the basin, and its drainage area.

Table 5: Basin Characteristics

HUC-8 Sub-Basin Name	HUC-8 Sub-Basin Number	Primary Flooding Source	Description of Affected Area	Drainage Area (square miles)
Austin-Travis Lakes	12090205	Colorado River	Located in Blanco, Burnet, Hays, Llano, Travis, and Williamson counties. It begins at Alvin Wirtz Dam, which forms Lake Marble Falls in Burnet County, and flows southeast through the City of Austin in Travis County.	1,241
Pedernales	12090206	Pedernales River	Encompasses 815,000 acres mainly in Blanco and Gillespie counties. It is also located in Burnet, Hayes, Kendall, Kerr, Kimble, and Travis counties. The Pedernales River starts in the southeastern corner of Kimble County, and flows east emptying into Lake Travis in Travis County.	1,280
San Marcos	12100203	Blanco River and San Marcos River	Begins at upstream limit of the Blanco River, extends southeast, affecting half of Hays County, as well as portions of Blanco, Caldwell, Comal, Gonzales, Guadalupe, Kendall and Travis counties.	1,359

4.2 Principal Flood Problems

Table 6 contains a description of the principal flood problems that have been noted for Hays County by flooding source.

Table 6: Principal Flood Problems

Flooding Source	Description of Flood Problems
Hays County, All areas	Generally, the major floods experienced throughout the county are produced by heavy rainfall from frontal-type storms. Major flooding can be produced by the intense rainfall usually associated with localized thunderstorms, which may occur at any time during the year, but are more prevalent in the spring and summer months. Major floods have occurred in 1921, 1929, 1970, 1972, 1974, 1981, and 1991. The 1869 and 1921 floods were extremely large, substantially in excess of 1-percent-annual-chance events based on studies conducted by the USGS. The occurrence of these floods is indicative of the capability of the region to produce floods significantly in excess of the 1-percent-annual-chance event.

Table 6: Principal Flood Problems, (continued)

Flooding Source	Description of Flood Problems
City of San Marcos, all areas	The City of San Marcos has a long history of catastrophic floods. Rapid runoff and high peak discharges result from steep topography and relatively steep stream gradients.

Table 7 contains information about historic flood elevations in the communities within Hays County.

Table 7: Historic Flooding Elevations

Flooding Source	Location	Historic Peak (Feet NAVD88)	Event Date	Approximate Recurrence Interval (years)	Source of Data
Blanco River	Valley View Drive	1002.35	05/2015	100	Lower Colorado River Authority
Blanco River	Fisher Store Road	965.96	05/2015	100	Guadalupe Basin River Authority
Blanco River	Lazy Lane	867.08	05/2015	100	Guadalupe Basin River Authority
Blanco River	River Road Wimberley	865.24	05/2015	100	Guadalupe Basin River Authority
Blanco River	Wayside Drive and Savage Lane	856.89	05/2015	100	Guadalupe Basin River Authority
Blanco River	Upstream of FM12 Bridge	842.58	05/2015	100	Guadalupe Basin River Authority
Blanco River	269 River Road	583.42	05/2015	100	Halff
Blanco River	LCRA Substation near River Road	584.6	05/2015	100	Halff
Blanco River	SH 80 Bridge San Marcos	586.35	05/2015	100	Guadalupe Basin River Authority
Blanco River	Railroad Bridge at River Road	589.36	05/2015	100	Halff
Blanco River	Tennis Courts at Fire Station	606.26	05/2015	100	Halff

Table 7: Historic Flooding Elevations, (continued)

Flooding Source	Location	Historic Peak (Feet NAVD88)	Event Date	Approximate Recurrence Interval (years)	Source of Data
Blanco River	Grove Apartments	602.77	05/2015	100	Halff
Blanco River	LCRA Substation near Carlson Circle	611.7	05/2015	100	Halff
Blanco River	Kappa Sigma house at Uhland Road	598.47	05/2015	100	Guadalupe Basin River Authority
Blanco River	Blanco Vista/Old Stagecoach Road	629.08	05/2015	100	Halff
Blanco River	Broadie Lane	581.15	05/2015	100	Guadalupe Basin River Authority
Blanco River	Harris Hill Road	606.16	05/2015	100	Guadalupe Basin River Authority
Blanco River	Crabapple Road	1396.98	05/2015	100	Lower Colorado River Authority
Blanco River	Chimney Valley Road	1195.51	05/2015	100	Lower Colorado River Authority
Blanco River	Cox Road	1230.13	05/2015	100	Lower Colorado River Authority
Blanco River	Tejas Trail	1276.14	05/2015	100	Lower Colorado River Authority
Blanco River	FM165	1292.49	05/2015	100	Lower Colorado River Authority
Blanco River	Blanco State Park Restroom	1311.18	05/2015	100	Lower Colorado River Authority
Little Blanco River	CR 101	1276.33	05/2015	100	Lower Colorado River Authority
Little Blanco River	FM 473	1176.35	05/2015	100	Lower Colorado River Authority

Table 7: Historic Flooding Elevations, (continued)

Flooding Source	Location	Historic Peak (Feet NAVD88)	Event Date	Approximate Recurrence Interval (years)	Source of Data
Little Blanco River	US 281	1265.56	05/2015	100	Lower Colorado River Authority
San Marcos River	Cape Road	572.09	05/2015	100	Guadalupe Basin River Authority
San Marcos River	Ramon Lucio park	573.16	05/2015	100	Guadalupe Basin River Authority

4.3 Non-Levee Flood Protection Measures

Table 8 contains information about non-levee flood protection measures within Hays County such as dams, jetties, and or dikes. Levees are addressed in Section 4.4 of this FIS Report.

Table 8: Non-Levee Flood Protection Measures

Flooding Source	Structure Name	Type of Measure	Location	Description of Measure
Barton Creek	N/A	Dam	Various locations along Barton Creek	N/A
Barton Creek Tributary 1	N/A	Dam	Medlin Loop	Concrete Dam
Barton Creek Tributary 1	N/A	Dam	Various locations along Barton Creek Tributary 1	N/A
Barton Creek Tributary 2-1	N/A	Dam	Various locations along Barton Creek Tributary 2-1	N/A
Barton Creek Tributary 3	N/A	Dam	Various locations along Barton Creek Tributary 3	
Bear Creek	N/A	Dam	Various locations along Bear Creek	
Bear Creek Tributary 1A	N/A	Dam	Various locations along Bear Creek Tributary 1A	

Flooding Source	Structure Name	Type of Measure	Location	Description of Measure
Blanco River	5 Mile Dam	Dam	At station 47432 along Blanco River	
Brushy Creek	N/A	Dam	Downstream end of reservoir near Satterwhite Road	Floodwater-retarding structure
Cottonwood Branch	N/A	Dam	Various locations along Cottonwood Branch	Floodwater-retarding structure
Cypress Creek	N/A	Dam	At station 72453 along Cypress Creek	
Garlic Creek Tributary	N/A	Dam	Approximately 250 feet upstream of Cullen Blvd	
Little Barton Creek	N/A	Dam	Various locations along Little Barton Creek	
Loneman Creek	N/A	Dam	Various locations along Loneman Creek	
Long Branch	N/A	Dam	Various locations along Long Branch	
Onion Creek	N/A	Dam/Weir	Various locations along Onion Creek	
Plum Creek	N/A	Dam	SCS Dam No. 1	Floodwater-retarding structure
Purgatory Creek	NRCS Dam 5	Dam	Purgatory Creek Natural Area	
Purgatory Creek	NRCS Dam No. 4	Dam	At station 45201 along Purgatory Creek	
Roy Branch	N/A	Dam	Various locations along Roy Branch	
San Marcos River	Public Dam	Dam	At station 403417 along San Marcos River	
Sink Creek	SCS Dam No. 1	Dam	Approximately 6000 feet upstream of the confluence of Pope Creek	

Flooding Source	Structure Name	Type of Measure	Location	Description of Measure
Sink Creek	SCS Dam No. 3	Dam	Approximately 2.5 miles upstream of the confluence with San Marcos Tributary	
Smith Creek	N/A	Dam	Various locations along Smith Creek	
Stream Brushy-1A	N/A	Dam	Approximately 1275 feet upstream of Goforth Rd	
Stream Plum-1	SCS Dam No.2	Dam	Approximately 2050 feet upstream of the confluence with Plum Creek	
Unnamed Lake	Dam No. 13	Dam	Downstream of Cottonwood Creek	

4.4 Levees

This section is not applicable to this Flood Risk Project.

Table 9: Levees

[Not Applicable to this Flood Risk Project]

SECTION 5.0 – ENGINEERING METHODS

For the flooding sources in the community, standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this study. Flood events of a magnitude that are expected to be equaled or exceeded at least once on the average during any 10-, 25-, 50-, 100-, or 500-year period (recurrence interval) have been selected as having special significance for floodplain management and for flood insurance rates. These events, commonly termed the 10-, 25-, 50-, 100-, and 500-year floods, have a 10-, 4-, 2-, 1-, and 0.2% annual chance, respectively, of being equaled or exceeded during any year.

Although the recurrence interval represents the long-term, average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year. The risk of experiencing a rare flood increases when periods greater than 1 year are considered. For example, the risk of having a flood that equals or exceeds the 100-year flood (1-percent chance of annual exceedance) during the term of a 30-year mortgage is approximately 26 percent (about 3 in 10); for any 90-year period, the risk increases to approximately 60 percent (6 in 10). The analyses reported herein reflect flooding potentials based on conditions existing in the community at the time of completion of this study. Maps and flood elevations will be amended periodically to reflect future changes.

In addition to these flood events, the “1-percent-plus”, or “1%+”, annual chance flood elevation has been modeled and included on the flood profile for certain flooding sources in this FIS Report. While not used for regulatory or insurance purposes, this flood event has been calculated to help illustrate the variability range that exists between the regulatory 1% annual chance flood elevation and a 1% annual chance elevation that has taken into account an additional amount of uncertainty in the flood discharges (thus, the 1% “plus”). For flooding sources whose discharges were estimated using regression equations, the 1%+ flood elevations are derived by taking the 1% annual chance flood discharges and increasing the modeled discharges by a percentage equal to the average predictive error for the regression equation. For flooding sources with gage- or rainfall-runoff-based discharge estimates, the upper 84-percent confidence limit of the discharges is used to compute the 1%+ flood elevations.

The engineering analyses described here incorporate the results of previously issued Letters of Map Change (LOMCs) listed in Table 27, “Incorporated Letters of Map Change”, which include Letters of Map Revision (LOMRs). For more information about LOMRs, refer to Section 6.5, “FIRM Revisions.”

5.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish the peak elevation-frequency relationships for floods of the selected recurrence intervals for each flooding source studied. Hydrologic analyses are typically performed at the watershed level. Depending on factors such as watershed size and shape, land use and urbanization, and natural or man-made storage, various models or methodologies may be applied. A summary of the hydrologic methods applied to develop the discharges used in the hydraulic analyses for

each stream is provided in Table 13. Greater detail (including assumptions, analysis, and results) is available in the archived project documentation.

A summary of the discharges is provided in Table 10. Frequency Discharge-Drainage Area Curves used to develop the hydrologic models may also be shown in Figure 7 for selected flooding sources. A summary of stillwater elevations developed for non-coastal flooding sources is provided in Table 11. Stream gage information is provided in Table 12.

Table 10: Summary of Discharges

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Barton Creek	Approximately 0.63 miles downstream from confluence with Cambrian Creek	42.11	27,360	35,650	42,240	49,480	50,310	69,870
Barton Creek	Approximately 0.41 miles from confluence with Cambrian Creek	41.89	27,390	35,660	42,270	49,480	50,310	69,870
Barton Creek	Approximately 1000 feet downstream from confluence with Cambrian Creek	39.78	26,890	34,800	41,010	48,070	48,880	67,950
Barton Creek	Approximately 0.28 miles downstream from confluence with Roy Branch	38.80	26,850	34,670	40,750	47,860	48,690	67,530
Barton Creek	Approximately 750 feet upstream from confluence with Roy Branch	35.71	25,760	33,170	38,790	45,890	46,670	63,930
Barton Creek	Approximately 1.12 miles upstream from confluence with Roy Branch	33.24	24,800	31,810	37,290	43,990	44,870	60,950

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Barton Creek	Approximately 0.28 miles downstream from confluence with Little Barton Creek (in Dipping Springs)	31.69	24,420	31,150	36,560	43,050	43,980	59,450
Barton Creek	Approximately 0.40 miles upstream from confluence with Little Barton Creek (in Dipping Springs)	25.53	21,400	27,450	32,090	37,440	38,400	51,190
Barton Creek	Approximately 1.11 miles downstream from confluence with Fitzhugh Creek	23.96	20,640	26,480	30,890	35,920	36,940	49,050
Barton Creek	Approximately 0.28 miles downstream from confluence with Fitzhugh Creek	22.59	20,760	26,630	31,010	35,920	37,020	49,160
Barton Creek	Approximately 800 feet upstream from confluence with Fitzhugh Creek	16.28	14,550	18,830	22,020	25,500	26,460	34,710
Barton Creek	Approximately 0.72 miles upstream from confluence with Fitzhugh Creek	15.07	13,960	17,980	20,980	24,340	25,340	32,960

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Barton Creek	Approximately 0.32 miles downstream from confluence with Barton Creek Tributary 1	13.91	13,350	17,130	19,950	23,090	24,100	31,030
Barton Creek	Just downstream from confluence with Barton Creek Tributary 1	11.60	10,610	13,680	16,010	18,520	19,400	24,910
Barton Creek	Approximately 0.24 miles downstream from confluence with Barton Creek Tributary 2	10.91	9,970	12,820	15,070	17,400	18,320	23,390
Barton Creek	Approximately 550 feet downstream from confluence with Barton Creek Tributary 2	9.47	8,400	11,080	12,900	14,820	15,650	20,220
Barton Creek	Approximately 0.25 miles downstream from confluence with Barton Creek Tributary 3	9.23	8,280	10,900	12,670	14,560	15,420	20,010
Barton Creek	Approximately 400 feet downstream from confluence with Barton Creek Tributary 3	7.92	7,100	9,100	10,490	12,250	12,640	17,670

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Barton Creek	Approximately 550 feet upstream from confluence with Barton Creek Tributary 3	7.67	6,920	8,840	10,240	11,980	12,280	17,290
Barton Creek Tributary 1	2981 (Approximately 0.56 miles upstream from confluence of Barton Creek Tributary 1 with Barton Creek)	2.308	3,140	3,920	4,530	5,210	5,540	7,030
Barton Creek Tributary 1	11091 (Approximately 2.1 miles upstream from confluence of Barton Creek Tributary 1 with Barton Creek)	1.072	1,570	1,940	2,230	2,560	2,740	3,430
Barton Creek Tributary 2	1841 (Approximately 0.35 miles upstream from confluence of Barton Creek Tributary 2 with Barton Creek)	1.441	2,340	2,870	3,290	3,770	3,940	5,040
Barton Creek Tributary 2	4100 (Approximately 0.77 miles upstream from confluence of Barton Creek Tributary 2 with Barton Creek)	1.283	2,220	2,720	3,110	3,560	3,750	4,750

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Barton Creek Tributary 2	6290 (Approximately 1.2 miles upstream from confluence of Barton Creek Tributary 2 with Barton Creek)	0.686	1,050	1,300	1,490	1,700	1,800	2,280
Barton Creek Tributary 2	9599 (Approximately 1.8 miles upstream from confluence of Barton Creek Tributary 2 with Barton Creek)	0.412	630	780	890	1,020	1,080	1,370
Barton Creek Tributary 2.1	1906 (Approximately 0.36 miles upstream from confluence of Barton Creek Tributary 2.1 with Barton Creek Tributary 2)	0.597	1,220	1,480	1,700	1,950	2,030	2,600
Barton Creek Tributary 2.1	4795 (Approximately 0.91 miles upstream from confluence of Barton Creek Tributary 2.1 with Barton Creek Tributary 2; Approximately 772 feet north of Bell Springs road)	0.377	880	1,060	1,200	1,360	1,440	1,790

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Barton Creek Tributary 3	1710 (Approximately 0.32 miles upstream from confluence of Barton Creek Tributary 3 with Barton Creek)	1.313	2,440	2,990	3,430	3,920	4,100	5,230
Barton Creek Tributary 3	5285 (Approximately 1 mile upstream from confluence of Barton Creek Tributary 3 with Barton Creek)	0.931	1,950	2,370	2,700	3,080	3,270	4,090
Barton Creek Tributary 3	9266 (Approximately 1.75 miles upstream from confluence of Barton Creek Tributary 3 with Barton Creek)	0.248	670	810	920	1,040	1,120	1,350
Bear Creek	77289	*	2,740	4,480	5,770	7,030	*	8,740
Bear Creek	75403	*	3,910	6,500	830	10,240	*	12,770
Bear Creek	67912	*	4,470	7,250	9,560	11,770	*	14,810
Bear Creek	65066	*	7,360	12,050	15,620	19,310	*	24,110
Bear Creek	61728	*	7,610	12,400	16,020	19,900	*	24,970
Bear Creek	59293	*	8,160	13,260	17,110	21,360	*	26,920
Bear Creek	54011	*	8,300	13,580	17,520	21,910	*	27,740
Bear Creek	50498	*	10,210	16,810	21,660	27,240	*	34,790

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Bear Creek	46130	*	10,340	17,100	22,040	27,650	*	35,360
Bear Creek Tributary 1	900 (Approximately 0.17 miles upstream from the confluence of Bear Creek Tributary 1 with Barton Creek)	*	3,580	5,640	7,240	8,830	*	12,820
Bear Creek Tributary 1	3255 (Approximately 0.61 miles upstream from the confluence of Bear Creek Tributary 1 with Barton Creek)	*	2,750	4,350	5,590	6,830	*	9,920
Bear Creek Tributary 1	9800 (Approximately 1.85 miles upstream from the confluence of Bear Creek Tributary 1 with Barton Creek)	*	1,800	2,850	3,660	4,470	*	6,500
Bear Creek Tributary 2	4785 (Approximately 0.9 miles upstream from the confluence of Bear Creek Tributary 2 with Barton Creek)	*	300	510	660	800	*	1,160
Blanco River	At confluence with San Marcos River ¹	436.2	49,550	*	96,710	101,900	*	108,920
Blanco River	At Interstate 35 ¹	432.7	50,780	*	116,570	158,330	*	238,580
Blanco River	At Kyle Gage	412.3	50,700	*	116,300	153,900	*	244,900

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Blanco River	Just upstream from Halifax Creek	392.7	50,900	*	116,400	152,900	*	241,500
Blanco River	Just downstream of confluence with Loneman Creek	382.9	51,300	*	116,700	153,100	*	241,000
Blanco River	At Ranch Road 12	355.1	51,600	*	116,600	152,600	*	238,500
Blanco River	Just upstream from Wilson Creek	310.7	50,800	*	114,000	147,900	*	228,700
Blanco River	Just upstream from Carpers Creek	274.7	51,100	*	112,900	145,200	*	221,500
Blanco River	At Fischer Store Road	268.8	51,600	*	113,900	146,100	*	222,200
Blanco River	Just upstream from Wanslow Creek	239.0	51,700	*	111,700	141,100	*	213,400
Blanco River	Just downstream of Little Blanco River	237.8	51,900	*	111,800	141,300	*	213,300
Blanco River	Just Upstream of Little Blanco River	169.1	40,600	*	85,100	106,900	*	159,500
Brushy Creek	Approximately 3,450 feet downstream from State Highway 21	21.79	4,140	*	7,720	9,640	*	15,070
Brushy Creek	Approximately 970 feet upstream from confluence with Stream Brushy-1	12.12	1,750	*	2,860	3,490	*	6,610

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Brushy Creek	At SCS Dam No. 12, approximately 1,050 feet upstream from FM 2001	8.62	90	*	105	115	*	130
Brushy Creek	At outflow of SCS Dam No. 12	8.61	55	*	500	2,140	*	6,610
Brushy Creek	Just downstream from emergency spillway channel for SCS Dam No. 10	1.80	125	*	245	580	*	1,910
Bypass Creek	At confluence with the San Marcos River	7.1	4,000	*	5,890	18,190	*	61,380
Bypass Creek	At State Highway 80	6.9	3,960	*	5,770	18,260	*	61,400
Bypass Creek	At Railroad Crossing	5	3,670	*	4,600	17,810	*	61,450
Bypass Creek	At Arnold Avenue	4.1	3,450	*	3,880	4,780	*	21,330
Bypass Creek	At State highway 21	3.8	3,870	*	6,250	7,580	*	44,580
Bypass Creek	At Harris Hill Road 1 st Crossing	2.4	2,290	*	3,710	6,090	*	44,440
Bypass Creek	At Harris Hill Road 2 nd Crossing	1.1	1,090	*	1,780	2,180	*	2,760

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Cottonwood Branch	1,597 (Approximately 0.30 miles upstream from the confluence of Cottonwood Branch with Roy Branch)	*	*	*	*	3,600	*	*
Cottonwood Branch	7800 (Approximately 1.47 miles upstream from the confluence of Cottonwood Branch with Roy Branch)	*	*	*	*	2,900	*	*
Cottonwood Creek	At Old Bastrop Highway	7.4	5,840	*	8,580	10,390	*	18,100
Cottonwood Creek	At State Highway 123	6.6	5,020	*	7,500	9,330	*	15,600
Cottonwood Creek	Just downstream from confluence with Stream CC-1	6.4	4,910	*	7,480	8,860	*	12,280
Cottonwood Creek	At McCarty Lane	3.1	3,130	*	4,690	5,500	*	8,110
Cypress Creek	Just upstream of the confluence with the Blanco River	38	23,750	*	36,230	42,960	*	61,940
Cypress Creek	At Ranch Road-12 1 st Crossing	37.7	23,740	*	36210	42,940	*	61,940

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Cypress Creek	Approximately 3000 feet downstream of Ranch Road 12 2 nd Crossing	34.6	23,290	*	35,180	42,020	*	60,240
Cypress Creek	Just downstream of Hog Creek confluence	33.1	23,100	*	34,670	41,650	*	59,370
Cypress Creek	At Jacobs Well Road	30.4	22,260	*	33,330	40,650	*	57,030
Cypress Creek	Just downstream of confluence with Stream Cypress-1	21.7	18,250	*	26,910	31,830	*	44,140
Cypress Creek	At Ledge Rock Road	7.7	7,050	*	10,410	12,340	*	16,990
Cypress Creek	At Pump Station Road	3.6	3,350	*	5,010	5,950	*	8,380
Garlic Creek	8492 (Approximately 1.61 miles upstream from the confluence of Garlic Creek)	*	2,650	4,400	5,770	7,360	*	11,470
Garlic Creek	12601 (Approximately 2.4 miles upstream from the confluence of Garlic Creek)	*	2,390	3,910	5,090	6,440	*	9,900
Garlic Creek	14774 (Approximately 2.8 miles upstream from the confluence of Garlic Creek)	*	2,180	3,510	4,540	5,670	*	8,600

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Garlic Creek	21827 (Approximately 4.13 miles upstream from the confluence of Garlic Creek)	*	2,030	3,230	4,150	5,150	*	7,710
Garlic Creek	28792 (Approximately 5.45 miles upstream from the confluence of Garlic Creek)	*	1,700	2,610	3,290	3,970	*	5,700
Garlic Creek	32716.44 (Approximately 6.2 miles upstream from the confluence of Garlic Creek)	*	1,150	1,760	2,220	2,680	*	3,850
Garlic Creek	31848 (Approximately 6.03 miles upstream from the confluence of Garlic Creek)	*	1,150	1,760	2,220	2,680	*	3,850
Garlic Creek Tributary 1	4416 (Approximately 0.84 miles upstream from the confluence of Garlic Creek Tributary 1 with Garlic Creek)	*	470	780	1,010	1,240	*	1,810
Hog Creek	Confluence with Cypress Creek	1.9	2,780	*	3,430	4,980	*	7,330
Hog Creek	Brookhollow Drive	1.6	2,530	*	3,930	4,750	*	6,810
Hog Creek	Brookmeadow Drive	1.4	2,440	*	3,790	4,570	*	6,500

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Hog Creek	Mountain Crest Drive	1.3	2,350	*	3,700	4,410	*	6,250
Hog Creek	Ranch Road 12	0.9	1,940	*	2,930	3,440	*	4,790
Little Barton Creek	3244 (Approximately 0.61 miles upstream from the confluence of Little Barton Creek with Barton Creek)	*	8,800	11,010	12,690	14,510	*	19,420
Little Barton Creek	6339 (Approximately 1.2 miles upstream from the confluence of Little Barton Creek with Barton Creek)	*	8,100	10,090	11,630	13,340	*	17,840
Little Barton Creek	8081 (Approximately 1.53 miles upstream from the confluence of Little Barton Creek with Barton Creek)	*	6,550	8,160	9,400	10,790	*	14,330
Little Barton Creek	10570 (Approximately 2 miles upstream from the confluence of Little Barton Creek with Barton Creek)	*	5,020	6,220	7,160	8,220	*	10,820

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Little Barton Creek	12894 (Approximately 2.44 miles upstream from the confluence of Little Barton Creek with Barton Creek)	*	3,660	4,510	5,180	5,940	*	7,380
Little Barton Creek	18108 (Approximately 3.43 miles upstream from the confluence of Little Barton Creek with Barton Creek)	*	2,830	3,450	3,950	4,500	*	5,980
Little Barton Creek	22841 (Approximately 4.32 miles upstream from the confluence of Little Barton Creek with Barton Creek)	*	1,020	1,230	1,390	1,580	*	2,080
Little Barton Creek	24469 (Approximately 4.63 miles upstream from the confluence of Little Barton Creek with Barton Creek)	*	610	740	840	950	*	1,250
Little Bear Creek	15041 (Approximately 600 feet from intersection of Little Bear Creek with Carpenter Lane)	*	7,390	13,760	19,040	23,840	*	35,500

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Little Bear Creek	26404 (Approximately 200 feet from intersection of Little Bear Creek with Chaparral Rd)	*	7,180	13,270	18,190	22,810	*	34,230
Little Bear Creek	32780 (Approximately 6.21 miles upstream from confluence of Little Bear Creek)	*	6,240	11,440	15,550	19,560	*	29,510
Little Bear Creek	44190 (Approximately 0.40 miles downstream from confluence of Little Bear Creek with Little Bear Creek Tributary 2B)	*	5,610	10,230	13,660	17,430	*	26,550
Little Bear Creek	45822 (Approximately at the confluence of Little Bear Creek with Little Bear Creek Tributary 2B)	*	5,440	9,790	13,020	16,530	*	24,940
Loneman Creek	Just upstream from confluence with the Blanco River	12.98	4,050	*	9,390	12,090	*	21,560
Loneman Creek	Just upstream from confluence with Smith Creek	6.25	2,490	*	5,710	7,330	*	12,960

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Long Branch	23188 (Approximately 4.39 miles upstream from confluence of Long Branch)	*	3,480	4,290	4,920	5,630	*	7,580
Long Branch	29414 (Approximately 5.57 miles upstream from confluence of Long Branch)	*	1,490	1,800	2,060	2,340	*	3,110
Long Branch	31574.12 (Approximately 5.97 miles upstream from confluence of Long Branch)	*	1,040	1,260	1,440	1,640	*	2,180
Onion Creek	Approximately 2.12 miles upstream from confluence with Bear Creek	173.17	22,590	42,300	61,470	80,490	82,310	124,480
Onion Creek	Approximately 2.78 miles upstream from confluence with Bear Creek	171.12	22,480	42,130	61,260	80,260	82,080	124,220
Onion Creek	Approximately 0.36 miles downstream from Union Pacific Railroad	170.59	22,460	42,110	61,260	80,250	82,080	124,250

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Onion Creek	Approximately 1.7 miles downstream from confluence with Mustang Branch (167934)	167.17	22,300	41,910	61,100	80,140	82,040	124,090
Onion Creek	Approximately 1.22 miles downstream from confluence with Mustang Branch (170478)	166.04	22,230	41,810	60,990	80,010	81,920	123,930
Onion Creek	At confluence with Mustang Branch	163.51	22,110	41,660	60,860	79,850	81,790	123,850
Onion Creek	Approximately 0.77 miles upstream from confluence with Mustang Branch	154.97	21,380	40,570	59,630	78,320	80,290	121,380
Onion Creek	Approximately 0.66 miles downstream from Ruby Ranch Road	153.66	21,310	40,480	59,570	78,250	80,220	121,260
Onion Creek	Approximately 0.5 miles downstream from Ruby Ranch Road	152.13	21,220	40,370	59,450	78,250	80,090	121,030
Onion Creek	Just downstream from Ruby Ranch Road	150.72	21,150	40,300	59,390	78,040	80,040	120,890

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Onion Creek	Approximately 0.48 miles upstream from Ruby Ranch Road	144.78	20,820	39,910	58,940	77,480	79,490	119,920
Onion Creek	Approximately 2.11 miles downstream from confluence with Yorks Creek	142.33	20,700	29,800	58,860	77,370	79,410	119,640
Onion Creek	At confluence with Yorks Creek	138.35	20,530	39,640	58,720	77,140	79,200	119,190
Onion Creek	Approximately 0.64 miles upstream from confluence with Yorks Creek	128.84	19,970	38,790	57,530	75,710	77,860	116,770
Onion Creek	Approximately 2.76 miles downstream from confluence with Flat Creek	126.62	19,890	38,700	57,460	75,590	77,760	116,540
Onion Creek	Approximately 0.45 miles downstream from confluence with Flat Creek	123.67	19,800	38,600	57,380	75,420	77,600	116,220
Onion Creek	Just upstream from confluence with Flat Creek	122.66	19,770	38,570	57,380	75,390	77,570	116,130

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Onion Creek	Approximately 0.75 miles upstream from confluence with Flat Creek	115.55	19,410	38,050	56,690	74,580	76,760	114,870
Onion Creek	At confluence with Rattlesnake Lake	114.59	19,380	38,010	56,670	74,530	76,710	114,780
Onion Creek	At confluence with Rocky Branch	110.32	19,150	37,640	56,120	73,860	76,070	113,610
Onion Creek	Approximately 0.57 miles downstream from Farm to Market Road 1826	105.81	18,830	37,110	55,370	72,960	75,220	112,100
Onion Creek	At confluence with Pier Branch	103.20	18,710	36,910	55,120	72,640	74,950	111,520
Onion Creek	Approximately 0.86 miles upstream from confluence with Pier Branch	97.47	18,240	36,170	54,110	71,470	73,890	109,610
Onion Creek	Just upstream from confluence with Jackson Branch	95.51	18,190	36,120	54,100	71,500	74,000	109,550
Onion Creek	Approximately 0.45 miles upstream from confluence with Jackson Branch	89.60	17,580	35,130	52,360	69,500	72,090	106,450

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Onion Creek	Approximately 800 feet upstream from confluence with Gatlin Creek	88.52	17,550	35,140	52,330	69,510	72,070	106,420
Onion Creek	Approximately 0.87 miles upstream from confluence with Gatlin Creek	72.78	16,160	31,660	45,160	57,710	59,800	87,260
Onion Creek	Approximately 1000 feet upstream from confluence with South Onion Creek	70.77	16,200	31,640	45,050	57,430	59,520	86,530
Onion Creek	Approximately 1.02 miles upstream from confluence with South Onion Creek	46.85	10,060	20,290	29,410	37,870	39,500	57,070
Onion Creek	Approximately 1.90 miles upstream from confluence with South Onion Creek	43.93	10,040	20,300	29,330	37,700	39,330	56,770
Onion Creek	Approximately 2.11 miles upstream from confluence with South Onion Creek	42.18	9,940	20,120	29,040	36,960	38,450	55,020

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Onion Creek	Approximately 2.46 miles upstream from confluence with South Onion Creek	41.84	9,960	20,160	29,060	36,960	38,460	55,000
Onion Creek	Approximately 2.77 miles upstream from confluence with South Onion Creek	39.85	9,840	19,970	28,770	36,570	38,110	54,370
Onion Creek	Approximately 3.35 miles upstream from confluence with South Onion Creek	39.33	9,890	20,050	28,810	36,580	38,130	54,340
Onion Creek	Approximately 3.68 miles upstream from confluence with South Onion Creek	38.13	9,810	19,920	28,620	36,330	37,880	53,990
Onion Creek	Approximately 2.28 miles downstream from McCafferty Road	36.74	9,810	19,900	28,540	36,210	37,780	53,740
Onion Creek	Approximately 1.6 miles downstream from McCafferty Road	33.53	9,540	19,320	27,650	35,000	36,700	51,980
Onion Creek	Approximately 600 feet upstream from McCafferty Road	30.85	9,450	18,930	27,000	34,130	35,960	50,660

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Onion Creek	Approximately 0.94 miles upstream from McCafferty Road	26.59	9,280	18,310	26,130	32,950	34,840	48,960
Onion Creek	*	22.76	8,890	17,150	24,580	30,760	32,570	45,810
Onion Creek	*	20.48	8,370	16,320	23,170	28,910	30,630	42,960
Onion Creek	*	20.23	8,390	16,320	23,160	28,900	30,610	42,950
Onion Creek	*	15.66	6,680	13,500	18,800	23,440	24,830	34,660
Onion Creek	*	10.73	5,540	10,840	14,580	18,060	19,320	26,470
Onion Creek	*	8.88	5,520	10,130	13,440	16,620	17,870	24,280
Onion Creek	*	5.84	3,770	6,710	8,890	10,980	11,830	16,030
Onion Creek	*	3.16	2,300	4,010	5,300	6,540	7,200	9,560
Plum Creek	Approximately 1,880 feet downstream from State Route 21	37.00	5,050	*	9,580	14,150	*	34,850
Plum Creek	Approximately 2,400 feet upstream from County Route 156	15.96	3,480	*	6,480	9,590	*	17,370
Plum Creek	Approximately 580 feet upstream from confluence with Stream Plum-1 tributary	5.82	1,860	*	3,580	4,460	*	7,080

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Plum Creek	Just upstream from emergency spillway channel	1.89	120	*	190	240	*	1,670
Pope Creek	At confluence with Sink Creek	4.8	970	*	1,400	1,600	*	4,400
Pope Creek	Outflows from NRCS Dam No. 2	4.3	110	*	120	880	*	4,300
Pope Creek	Inflows to NRCS Dam No. 2	4.3	6,900	*	10,200	11,900	*	16,200
Purgatory Creek	At confluence with the San Marcos River	36.9	2,800	*	4,500	7,500	*	11,300
Purgatory Creek	At South Guadalupe Street	36.8	2,800	*	4,800	7,500	*	17,300
Purgatory Creek	At South Mitchell Street	35.9	1,800	*	4,000	7,500	*	21,500
Purgatory Creek	At Hunter Road ²	35.0	660	*	1,590	4,590	*	13,400
Purgatory Creek	Outflows from SCS Site No. 5	34.3	8,360	*	3,600	10,000	*	28,200
Purgatory Creek	Inflows to SCS Site No. 5	34.3	17,700	*	26,900	32,100	*	44,100
Purgatory Creek	Just upstream from confluence with Stream PC-1	28.8	9,100	*	13,500	16,000	*	33,500

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Purgatory Creek	Outflows from SCS Site No. 4	20.0	440	*	3,600	9,500	*	30,200
Purgatory Creek	Inflows to SCS Site No. 4	20.0	17,100	*	25,700	30,400	*	42,000
Purgatory Creek Diversion No. 1	At confluence with Purgatory Creek ²	*	1,040	*	2,040	5,410	*	14,900
Purgatory Creek Diversion No. 1	At Hunter Road ²	*	1,040	*	2,040	5,410	*	14,900
Purgatory Creek Diversion No. 1	Just downstream of divergence with Purgatory Creek	*	1,040	*	2,040	4,690	*	9,940
Richmond Branch	Approximately 2600 ft upstream of the confluence with Porter Creek	1.69	2,435	*	3,385	3,867	*	5,796
Roy Branch	2075 (Approximately 0.39 miles upstream from confluence of Roy Branch with Barton Creek)	*	*	*	*	7480	*	*
Roy Branch	5090 (Approximately 0.96 miles upstream from confluence of Roy Branch with Barton Creek)	*	*	*	*	7010	*	*

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Roy Branch	8965 (Approximately 1.7 miles upstream from confluence of Roy Branch with Barton Creek)	*	*	*	*	3630	*	*
Roy Branch	14253 (Approximately 2.70 miles upstream from confluence of Roy Branch with Barton Creek)	*	*	*	*	2550	*	*
San Marcos River	Just downstream of Blanco River ¹	531.3	51,270	*	116,420	144,160	*	186,930
San Marcos River	Just upstream from the Blanco River ¹	94.9	10,800	*	19,750	42,320	*	80,010
San Marcos River	At Cape Road ¹	92.1	11,460	*	17,390	27,050	*	61,000
San Marcos River	At Interstate 35 ¹	87.4	8,360	*	13,030	16,920	*	35,230
San Marcos River	At Cheatham Street ¹	87.2	8,400	*	13,020	17,590	*	39,230
San Marcos River	Just downstream of Purgatory Creek ¹	86.9	8,370	*	12,950	17,810	*	42,030
San Marcos River	At East Hopkins Street ¹	49.4	5,610	*	8,380	10,920	*	33,820
San Marcos River	At Spring Lake Dam ¹	48.5	5,520	*	8,220	11,120	*	32,860
San Marcos River	At Lime Kiln Road ¹	48	5,650	*	8,810	11,300	*	33,720

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Sink Creek	At Lime Kiln Road	44.6	5,300	*	7,900	10,800	*	32,900
Sink Creek	Outflows from SCS Site No. 3	43.3	930	*	3,300	10,900	*	33,000
Sink Creek	Inflows to SCS Site No. 3	43.3	9,100	*	13,400	15,900	*	35,400
Sink Creek	Outflows from SCS Site No. 1	33.6	330	*	2,900	8,100	*	31,700
Sink Creek	Inflows to Site No. 1	33.6	26,000	*	40,300	48,300	*	66,900
Sink Creek	At Fulton Ranch Road	14.7	12,400	*	19,700	23,600	*	32,800
Sink Creek	At Ranch Road 12	8	8,600	*	13,000	15,400	*	21,200
Smith Creek	Just upstream from confluence with Loneman Creek	3.63	1,730	*	3,990	5,110	*	9,060
Spring Branch	At Union Pacific Railroad	1.43	*	*	*	2,276	*	*
Spring Branch	At FM 450	0.23	*	*	*	473	*	*
Stream Bear-1	At confluence with Bear Creek	4.85	2,260	*	6,880	9,900	*	21,590
Stream Bear-1	Just upstream of confluence with Stream Bear-1A	3.71	1,890	*	5,610	8,040	*	17,250

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Stream Bear-2	Just upstream from confluence with Bear Creek	0.34	385	*	1,060	1,490	*	3,040
Stream Brushy-1	At confluence with Brushy Creek	5.47	2,270	*	4,010	4,930	*	7,430
Stream Brushy-1	Approximately 750 feet upstream from confluence with Stream Brushy-1A	1.66	1,025	*	1,760	2,150	*	3,170
Stream Brushy-1	Approximately 0.43 mile upstream from County Route 125	1.00	730	*	1,280	1,560	*	2,330
Stream Brushy-1A	At confluence with Stream Brushy-1	0.78	620	*	1,085	1,320	*	1,970
Stream CC-1	At confluence with Cottonwood Creek	2.2	2,670	*	3,930	4,590	*	6,420
Stream CC-1	At Interstate 35	0.9	1,100	*	1,610	1,870	*	3,160
Stream CC-1	Approximately 890 feet upstream of Barnes Drive	0.6	1,120	*	1,670	1,970	*	2,800
Stream CC-1 South	At confluence with Stream CC-1	0.4	920	*	1,320	1,530	*	2,130
Stream CC-2	At Railroad Crossing	0.8	1,170	*	1,650	1,890	*	2,630

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Stream CC-2D	At confluence with Cottonwood Creek	*	5	*	520	545	*	700
Stream CC-IH35	Just downstream from Cottonwood Creek at IH-35	*	270	*	696	885	*	1,360
Stream Cypress-1	Just upstream from confluence with Cypress Creek	2.11	1,205	*	2,560	3,230	*	5,430
Stream LB-1	At confluence with Little Bear Creek	3.78	1,780	*	3,720	4,690	*	7,840
Stream PC-1	At confluence with Purgatory Creek	2.3	3,500	*	5,200	6,200	*	8,600
Stream PC-1	At West McCarty Lane	1.7	3,100	*	4,600	5,400	*	7,500
Stream Plum-1	At confluence with Plum Creek	2.96	135	*	445	1,300	*	3,450
Stream Plum-1	Just downstream of U.S. Interstate 35	1.16	810	*	1,400	1,710	*	2,550
Stream Plum-1	Approximately 1,000 feet downstream of South Sledge Road	0.62	530	*	915	1,110	*	1,640
Stream WSC-1	At confluence with Willow Springs Creek	0.4	980	*	1,500	1,770	*	2,530
Stream WSC-1	At West McCarty Lane	0.3	640	*	940	1,090	*	1,570

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Stream WSC-RR	At confluence with Willow Springs Creek ⁴	*	1,760	*	2,510	2,870	*	7,430
Stream WSC-RR	Approximately 100 feet upstream of Railroad crossing ⁴	*	2,000	*	3,000	3,540	*	5,090
Stream WSC-RR	At divergence with Willow Springs Creek ⁴	*	1,800	*	2,470	2,780	*	6,240
Unnamed Tributary to Blanco River	Approximately 350 feet downstream of Deer Lake Road	0.41	*	*	*	1,135	*	*
Unnamed Tributary to Plum Creek	At confluence with Plum Creek	0.53	*	*	*	209	*	*
Unnamed Tributary to Plum Creek	At Arbor Knot Drive	0.13	*	*	*	457	*	*
Willow Springs Creek	At confluence with the San Marcos River	4.5	4,200	*	6,200	7,200	*	14,000

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Willow Springs Creek	At South Guadalupe Street	3.8	3,600	*	5,000	5,700	*	12,900
Willow Springs Creek	At Ellis Street	3.5	3,400	*	4,800	5,400	*	9,400
Willow Springs Creek	Just upstream from confluence with WSC-RR	3.5	1,900	*	2,600	3,000	*	3,800
Willow Springs Creek	Just upstream of the Railroad Crossing	2.9	3,400	*	5,100	6,000	*	8,900
Willow Springs Creek	At Wonder World Drive	2.8	3,500	*	5,400	6,500	*	9,800

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Willow Springs Creek	At Hunter Road	2.3	3,100	*	4,800	5,700	*	8,500
Willow Springs Creek	At Rolling Oaks	1.1	2,000	*	3,100	3,600	*	5,000
Willow Springs Creek	Just downstream of confluence with Stream WSC-1	1.0	1,900	*	2,900	3,400	*	4,700
Willow Springs Creek	At West McCarty Lane	0.5	950	*	1,400	1,600	*	2,300
Wilson Creek	At confluence with the Blanco River	5.35	2,240	*	4,780	6,060	*	10,250

Table 10: Summary of Discharges, (continued)

Flooding Source	Location	Drainage Area (Square Miles)	Peak Discharge (cfs)					
			10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance Existing	1% Annual Chance Future	0.2% Annual Chance
Wilson Creek	Just upstream from Heaton Hollow	3.33	1,630	*	3,500	4,420	*	7,490

¹Proposed Flows at these locations are taken from the Blanco-San Marcos confluence unsteady hydraulic model

²Proposed Flows at these locations are taken from the final flow splits in the Purgatory hydraulic model

³Proposed Flows at these locations are taken from the final flow splits in the Lower San Marcos hydraulic model

⁴Proposed Flows at these locations are taken from the final flow splits in the Willow Springs hydraulic model

*Not calculated for this Flood Risk Project

Figure 7: Frequency Discharge-Drainage Area Curves

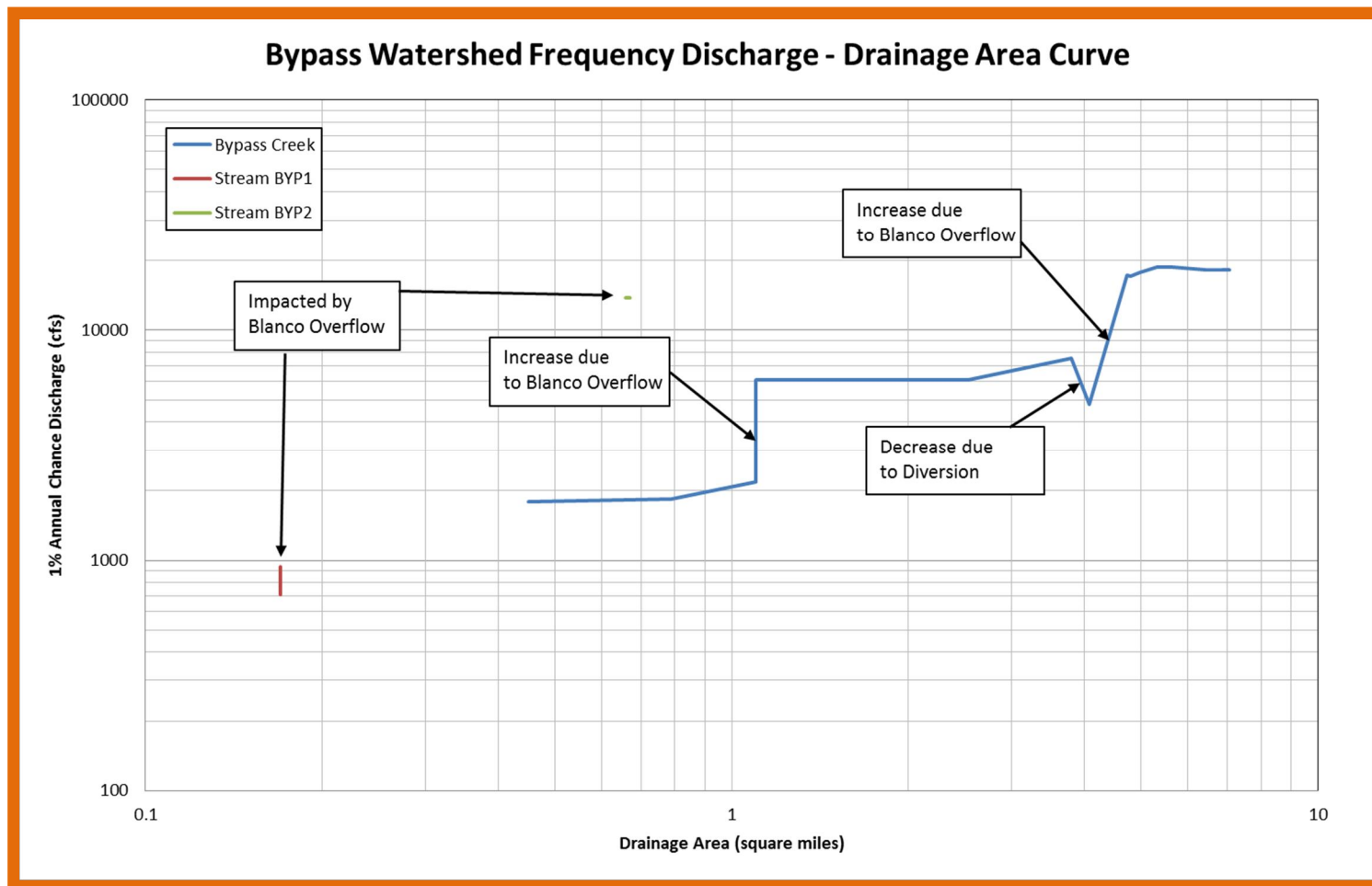


Figure 7: Frequency Discharge-Drainage Area Curves, (continued)

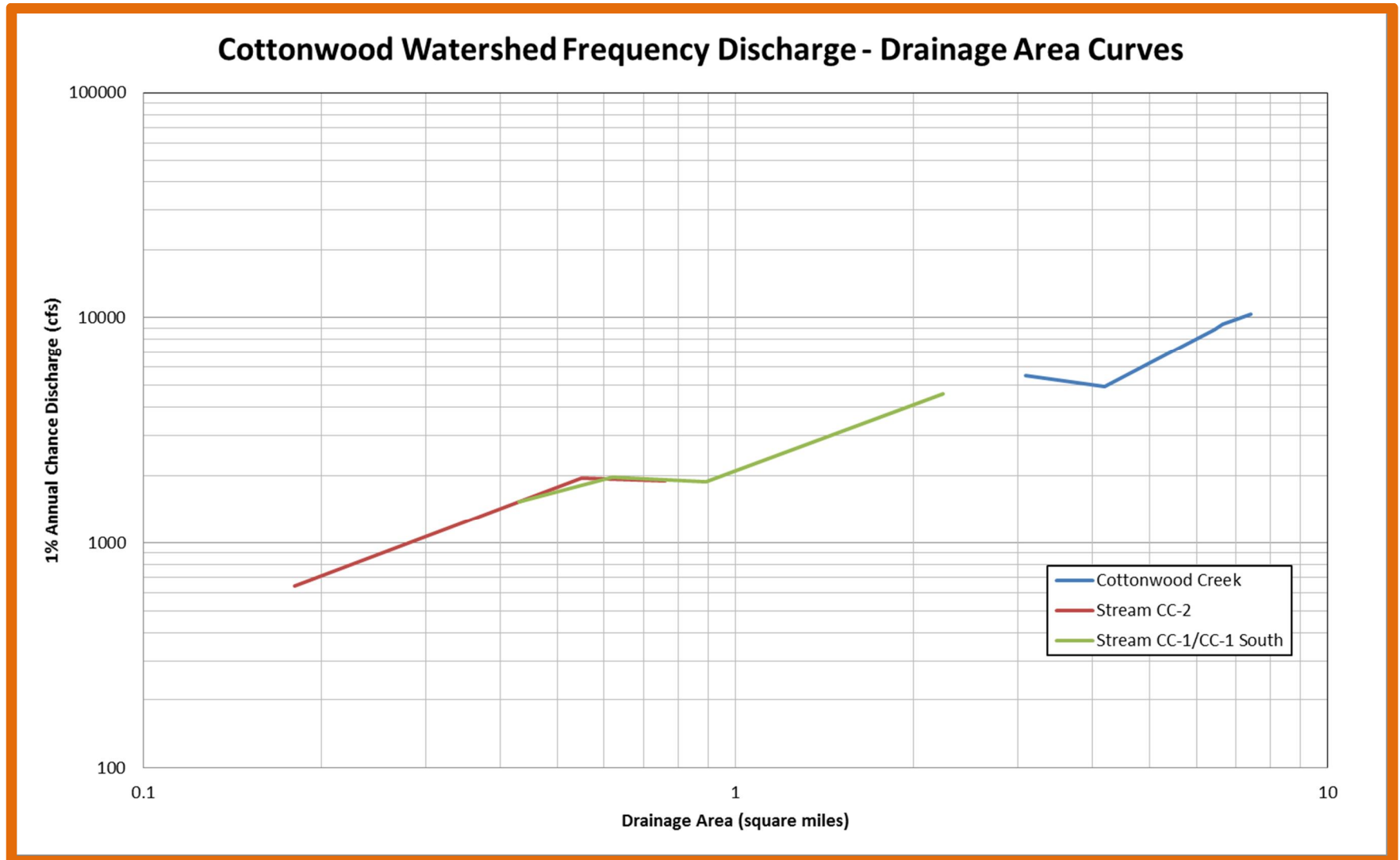


Figure 7: Frequency Discharge-Drainage Area Curves, (continued)

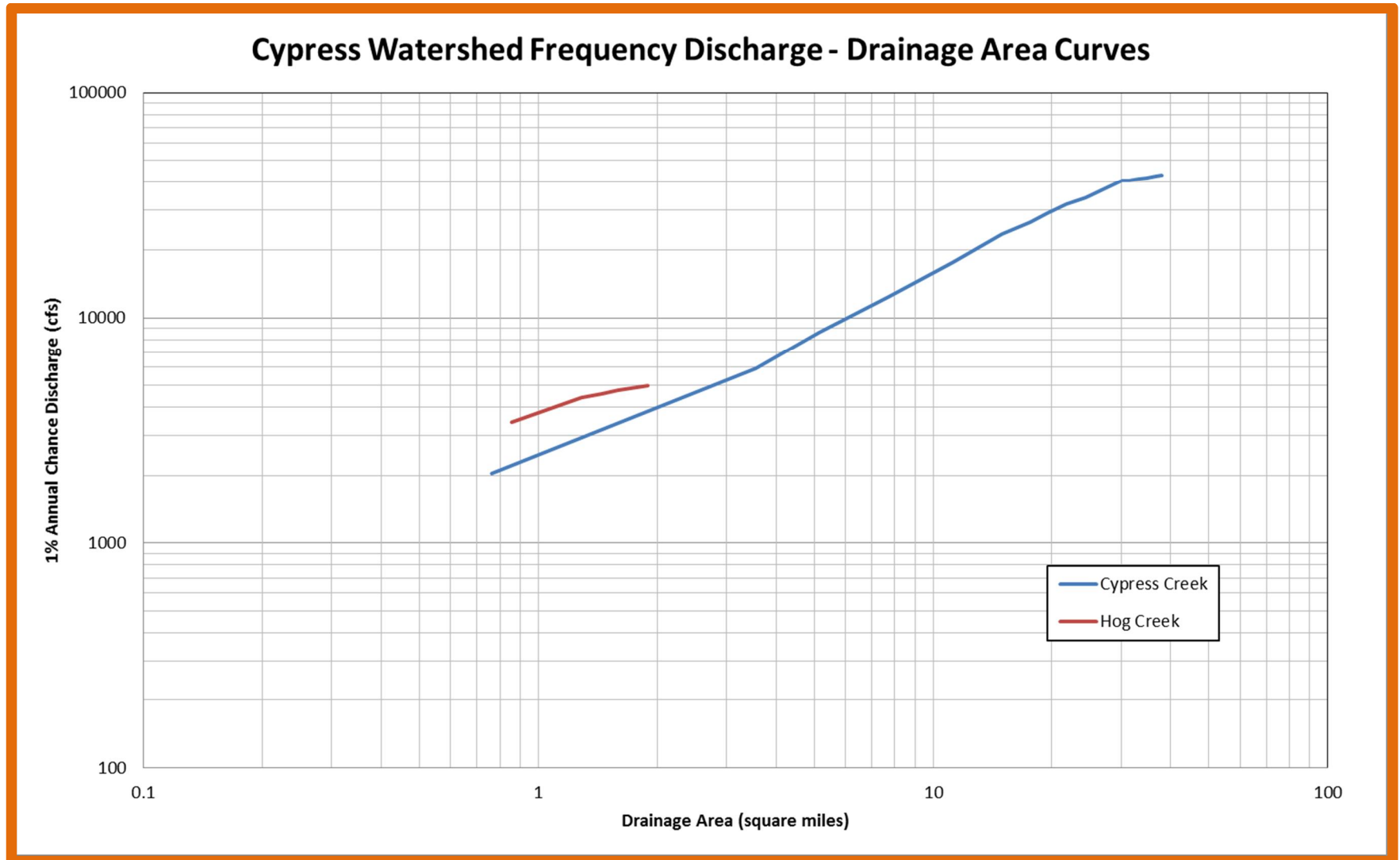


Figure 7: Frequency Discharge-Drainage Area Curves, (continued)

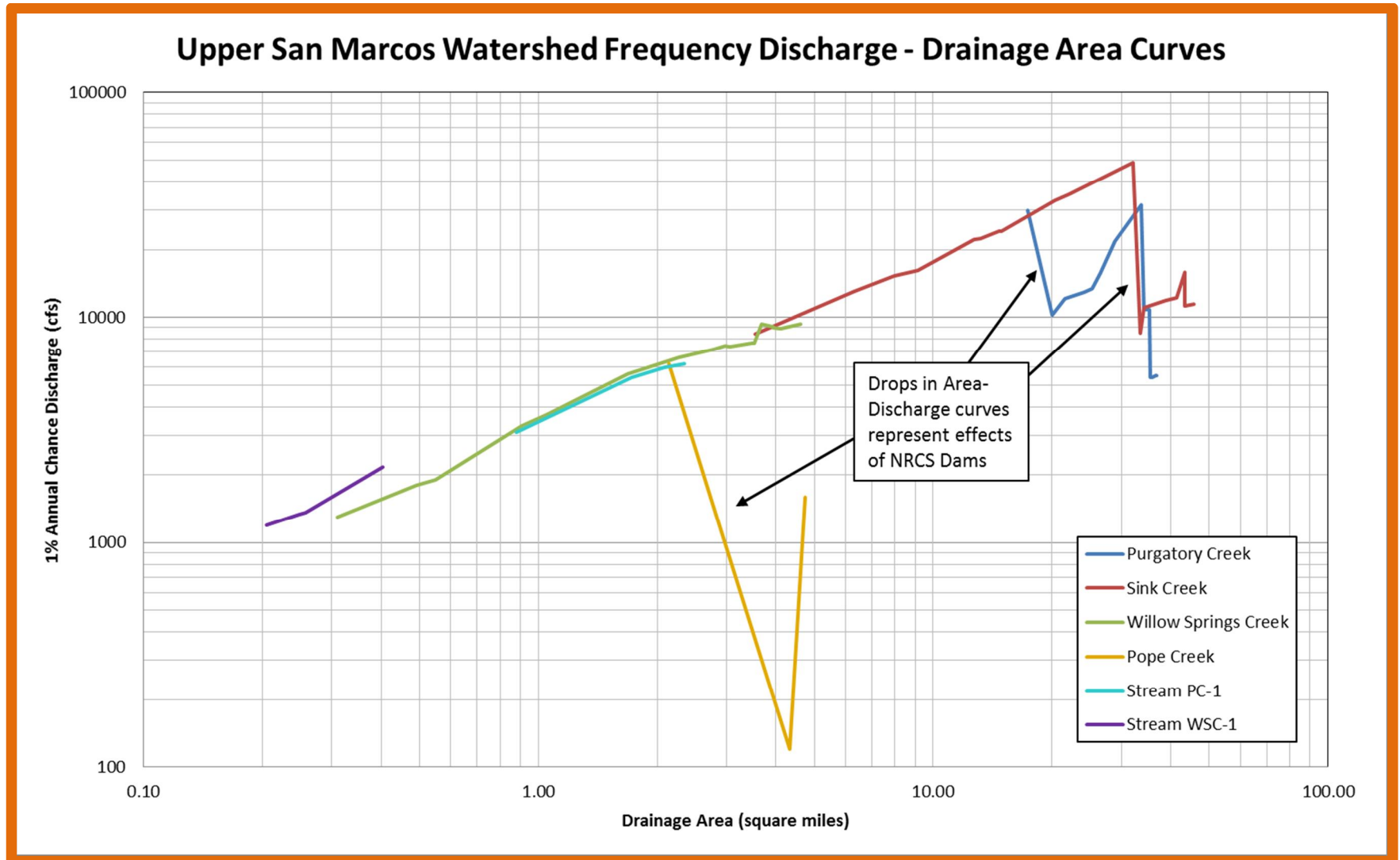


Figure 7: Frequency Discharge-Drainage Area Curves, (continued)

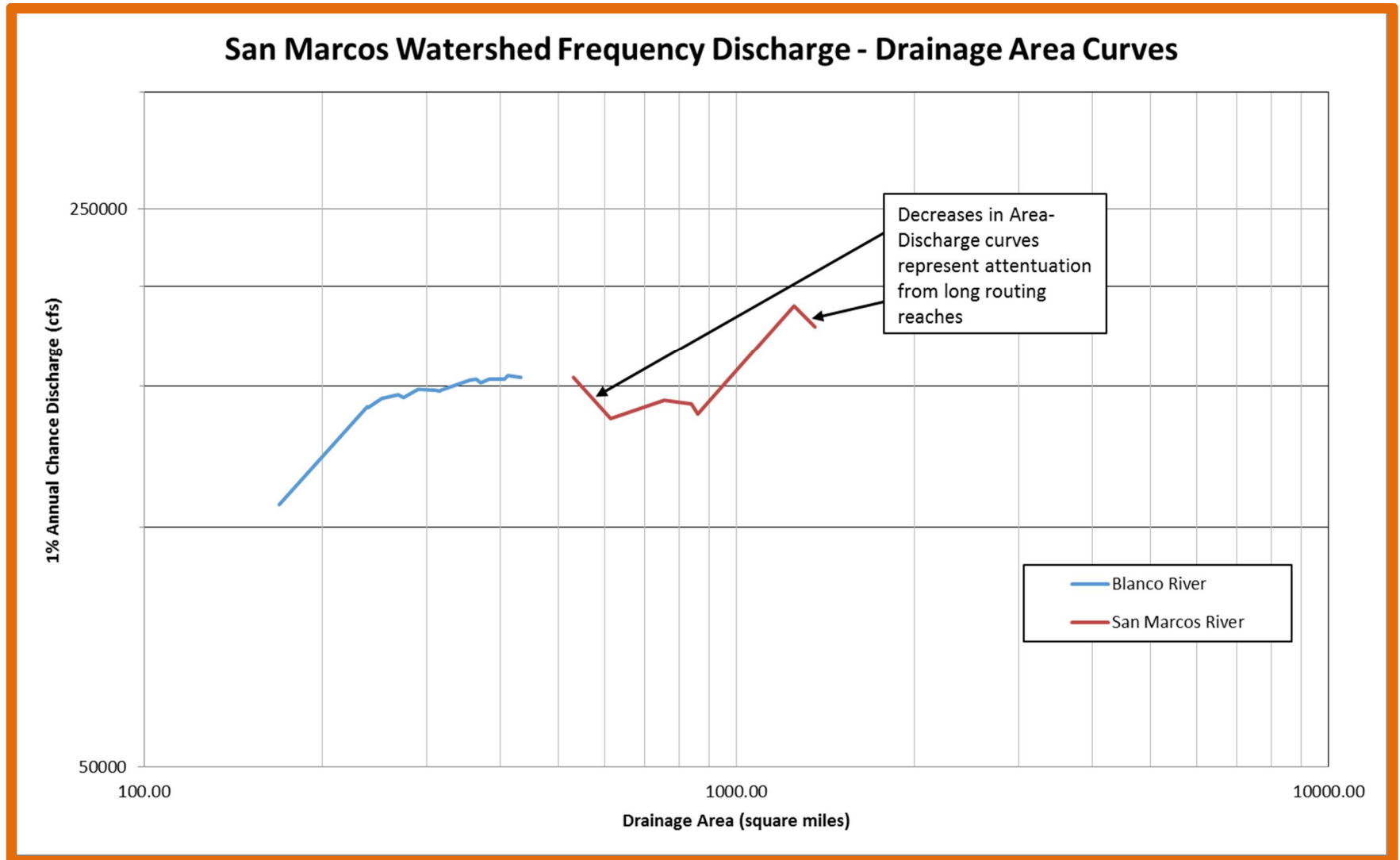


Table 11: Summary of Non-Coastal Stillwater Elevations

Flooding Source	Location	Elevations (feet NAVD88)				
		10% Annual Chance	4% Annual Chance	2% Annual Chance	1% Annual Chance	0.2% Annual Chance
Brushy Creek	At SCS Dam No. 10	678.8	*	682.2	683.4	685.2
Brushy Creek	At SCS Dam No. 12	613.1	*	616.0	617.2	619.0
Brushy Creek	At SCS Dam No. 14	531.4	*	537.2	538.9	541.9
Cottonwood Creek/Unnamed Lake	At SCS Dam No. 13	585.3	*	590.7	592.2	594.9
Cottonwood Creek	At San Marcos Outlet Mall Detention Pond	638.9	*	639.8	640.2	641.0
Plum Creek	At SCS Dam No. 1	753.2	*	757.5	759.4	761.9
Purgatory Creek	At NRCS Dam No. 4	862.8	871.0	876.0	878.88	883.8
Purgatory Creek	At NRCS Dam No. 5	645.4	650.6	653.1	655.9	661.5
Sink Creek	At SCS Dam No. 1	733.7	739.7	743.6	746.5	752.0
Sink Creek	At SCS Dam No. 3	625.4	628.6	630.0	633.3	639.7
Stream Plum-1	At SCS Dam No. 2	655.6	*	658.6	659.7	663.5
Unnamed Tributary to Plum Creek	At SCS Dam No. 3	*	*	*	660.4	*

*Not calculated for this Flood Risk Project

Table 12: Stream Gage Information used to Determine Discharges

Flooding Source	Gage Identifier	Agency that Maintains Gage	Site Name	Drainage Area (Square Miles)	Period of Record	
					From	To
Bear Creek	08158810	USGS	Bear Creek bl FM 1826 near Driftwood, TX	12.2	07/07/1979	Present
Blanco River	08171000	USGS	Blanco River at Wimberly, TX	355	08/06/1924	Present
Blanco River	08171300	USGS	Blanco River near Kyle, TX	412	05/29/1956	Present
Onion Creek	08158700	USGS	Onion Creek near Driftwood, TX	124	07/01/1979	Present
Onion Creek	08158800	USGS	Onion Creek at Buda, TX	166	07/01/1979	02/20/1996
San Marcos River	08170500	USGS	San Marcos River at San Marcos, TX	48.9	07/1915	Present

5.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of flooding from the sources studied were carried out to provide estimates of the elevations of floods of the selected recurrence intervals. Base flood elevations on the FIRM represent the elevations shown on the Flood Profiles and in the Floodway Data tables in the FIS Report. Rounded whole-foot elevations may be shown on the FIRM in coastal areas, areas of ponding, and other areas with static base flood elevations. These whole-foot elevations may not exactly reflect the elevations derived from the hydraulic analyses. Flood elevations shown on the FIRM are primarily intended for flood insurance rating purposes. For construction and/or floodplain management purposes, users are cautioned to use the flood elevation data presented in this FIS Report in conjunction with the data shown on the FIRM. The hydraulic analyses for this FIS were based on unobstructed flow. The flood elevations shown on the profiles are thus considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail.

For streams for which hydraulic analyses were based on cross sections, locations of selected cross sections are shown on the Flood Profiles (Exhibit 1). For stream segments for which a floodway was computed (Section 6.3), selected cross sections are also listed in Table 24, "Floodway Data."

A summary of the methods used in hydraulic analyses performed for this project is provided in Table 13. Roughness coefficients are provided in Table 14. Roughness coefficients are values representing the frictional resistance water experiences when

passing overland or through a channel. They are used in the calculations to determine water surface elevations. Greater detail (including assumptions, analysis, and results) is available in the archived project documentation.